Dental students in the fight against COVID-19: student’s perception of an interprofessional extension project

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Received: 06/28/2021. Accepted: 11/30/2021.

ABSTRACT
This paper reports the perception of Dentistry students concerning their participation in interprofessional extension actions in the management of the COVID-19 pandemic. For that purpose, a qualitative, cross-sectional and descriptive study was performed, using a script with open questions and a self-applied structured questionnaire sent to students participating in the University Extension Project by attention to the road borders of the State of Paraná and/or as attendants in the telehealth service in the management of COVID-19 (COVID-19 Information Center) and/or the Special Pharmacy of the State of Paraná. The reports were analyzed by the Collective Subject Discourse. All Dentistry students who participated in the project agreed to respond to this survey. The main contributions of the Extension Project to their training were identified as acquisition of new knowledge, opportunity for interprofessional action, practical application of theoretical knowledge, technical-scientific learning, promotion of reception, qualified listening and humanized care. Thus, it is concluded that the guidelines for Extension in Brazilian Higher Education are being met, promoting the integral and citizen training of students, providing the experience of their knowledge in an interprofessional and interdisciplinary manner.

1 INTRODUCTION

According to the Curriculum Guidelines for the Dentistry Course of 2021, the Unified Health System (SUS) should be included as an integral stage in the training of dentists, with emphasis on comprehensive health care and on training health-promoting professionals who are able to work in an interprofessional, interdisciplinary and transdisciplinary team.

Every work is a return to society, in which professionals need to be prepared to perform the technical-social function of their work. Given this scenario, a more holistic and humanized training within the academy is essential, in which the acquisition of knowledge contributes to the development of ideas, facilitating the construction of autonomy and promoting the formation of citizens and conscious workers2-3.

In this sense, the role of University Extension is highlighted, which is defined by Resolution N. 7 of December 18, 20184 as “[...] an activity integrated to the curriculum and organization of research, constituting an interdisciplinary, political, educational, cultural, scientific and technological process, which promotes transforming interaction between higher education institutions and other sectors of society, by the production and application of knowledge, in permanent articulation with teaching and research”. Thus, it provides students with citizenship education integrated into the curriculum4, allowing the socialization of knowledge and promoting dialogue between scientific knowledge and popular knowledge1,3,5.

In December 2019, several cases of an unknown respiratory infection were reported in Wuhan, China, associated with exposure of individuals in an animal trading market6. It was then discovered that these were the first cases of the new coronavirus called Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2), which causes what was called the new coronavirus disease (COVID-19)6, whose main symptoms and clinical signs are fever, cough, dyspnea, myalgia, fatigue, headache, shortness of breath, anosmia and dysgeusia, being more severe in elderly people and individuals with comorbidities7. The transmission of SARS-CoV-2 occurs mainly by saliva droplets and direct contact with contaminated surfaces8, and it is known that asymptomatic individuals can also spread the disease9.

In Brazil, several strategies were adopted to manage the COVID-19, including the publication of prevention and treatment protocols and the monitoring and control of epidemiological data10. In the State of Paraná, by Decree n. 4230 of March 16, 2020, measures were defined to address the public health emergency resulting from the Coronavirus, including quarantine, isolation, medical examinations, laboratory tests, specific medical treatments, teleworking for public workers, among others11. Considering this context, on the same date, the Federal University of Paraná (UFPR) suspended the academic calendars of undergraduate, graduate and professional and technological education courses for 14 days12, which was later extended.

In response to the health and social crisis established by the pandemic, the Aracaju Foundation for Support to Scientific and Technological Development of the State of Paraná, in partnership with the General Superintendence of Science, Technology and Higher Education and the Paraná State Health Department, on March 19, 2020, proposed the Institutional Support Program for Prevention and Care Actions to the New Coronavirus Pandemic by Public Call 09/2020, for the development of extension projects by State Higher Education Institutions in the State of Paraná and by UFPR13. Thus, the Institutional Support Program for Extension Actions for Prevention, Care and Fight...
against the New Coronavirus Pandemic was implemented in attention to the road borders of the State of Paraná. The team working in the development of the project actions was composed of professionals and students from several institutions who signed up for specific calls to participate as scholarship students, forming a multiprofessional team including the areas of Nursing, Medicine, Veterinary Medicine, Psychology and Dentistry. Since the onset, this program had dental professionals and dental students in the team. Thus, the objective of this paper is to report the perception of Dentistry students regarding their participation in interprofessional extension actions in the face of the COVID-19 pandemic.

2 METHODS

This qualitative, cross-sectional and descriptive study addresses the perception of Dentistry students related to their participation in the University Extension Project by attention to the road borders of the State of Paraná and/or acting as telehealth service attendants in COVID-19 (COVID-19 Information Center) and/or at the Special Pharmacy of the State of Paraná. This project started on March 31 and ended on December 30, 2020.

Qualitative research aims to understand the phenomena from the perspective of subjects. Thus, it is presented as raw material, experience, living, common sense and action, in order to understand the motivations, meanings and values that support people's opinions on a given topic.

To perform this study, data collection was performed by a script with open questions, sent by online questionnaire by email, concerning the students' perceptions about the contributions of work in the COVID-19 Information Center and/or in road borders for their training.

During the pandemic, online interviews proved to be an important alternative for conducting research, providing greater security for the researcher and interviewees, since they comply with the social distancing measure imposed by COVID-19.

The sample was defined by convenience, and individuals who agreed to participate by signing the Free Informed Consent Form (FICF) were included in the research. The questionnaire on Google Forms was made available in December 2020, allowing a 7-day interval for students to fill it. The questionnaire included the following questions: 1) Did you participate in the attention action to road borders in COVID-19? 2) Did you participate in the regional health care action (telehealth or health surveillance)? 3) Describe how this action contributed to your health education.

The selected students were in the last two years of the Dentistry course and received scholarships for the development of activities in the University Extension Project linked to State Higher Education Institutions and UFPR. The participating academics worked for a minimum of 6 months and a maximum of 9 months in the project, with a workload of 30 hours per week and an extension grant financed by Araucária Foundation for Support to Scientific and Technological Development of the State of Paraná. In the period, the students did not have face-to-face nor remote didactic activities at UFPR and worked as scholarship students at the State University of Ponta Grossa (UEPG).

The analysis of obtained reports occurred by the technique of the Collective Subject Discourse (CSD). This technique is based on the premise that individuals living in society share ideas, values, representations, senses, content of facts and arguments. Then, it proposes the organization of verbal statements, by methodological figures, which allow the construction of CSDs.

For this construction, four operations on
the speeches are necessary: the Key-Expressions (E-CH), excerpts from the verbal material of the individual speeches that best identify their content; the Central Ideas (CIs), names or expressions that describe the meanings of statements of each answer and also of the sets of answers of different people, yet with similar meanings; Anchorages (Acs), synthetic expressions that describe the ideologies and values present in the verbal material; and the Collective Subject Discourse (CSD), which is composed from the union of E-CH present in the testimonies, which have CIs of similar meaning, to form linked sentences. By the CSD, there is reconstitution of a collective being, opining in the form of a subject discourse presented in singular first person.

The present study was approved by the Institutional Review Board of the State University of Ponta Grossa under protocol n. 32121120.3.0000.0105.

3 RESULTS
Among the Dentistry students participating in the extension project, all five agreed to respond to this survey. Among these, four reported having participated in the attention action to road borders and in the COVID-19 Information Center; one only participated in actions at the COVID-19 Information Center; and one also worked at the Special Pharmacy of the State of Paraná.

Charts 1, 2 and 3 describe the central ideas that emerged from data analysis and their respective frequencies, as well as the CSD excerpts referring to each central idea. Chart 1 addresses the central ideas regarding the contributions of the attention action to road borders for the training of students, which involved learning about the prevention of COVID-19 and other diseases, opportunity for interprofessional action and the practical application of theoretical knowledge.

Concerning the contributions of work in the Call Center service (Chart 2), for the training of students, the analysis of epidemiological data is highlighted, as well as the opportunity for interprofessional work, the development of communication skills and the experience with telehealth, which may be expanded in the future.

Finally, regarding the contributions of work in the Special Pharmacy of the State of Paraná, learning about the workflows and the humanization of care were highlighted, as observed in Chart 3.

4 DISCUSSION
Extension has been encouraged by academic communities, which reinforce the importance of the relationship with the community outside the walls, by legal measures, accreditation of extension in undergraduate courses and by the demands of society itself. The findings of this study, related to the contribution of extension to learning, enabling the practical application of theoretical knowledge and interprofessional action, the development of communication and humanization skills, meet the extension guidelines presented in Resolution N. 7 of December 18, 2018, with regard to the interaction of the academic community with society by contact with complex contemporary issues; the citizen training of students, by the experience of their knowledge in an interprofessional and interdisciplinary manner; to the comprehensive formation of the student; and contribution to the confrontation of questions of the Brazilian society.

The Institutional Support Program for Extension Actions for the Prevention, Care and Fight of the New Coronavirus Pandemic –
Attention to the road borders of the State of Paraná provided students with the experience of interprofessional work, since it included students from different fields, such as Nursing, Medicine, Veterinary Medicine, Psychology and Dentistry. This experience was highlighted by the participants as an important contribution to their training, both by those who worked in the COVID-19 Information Center and by those who worked in the Attention to Borders.

Chart 1. Central ideas related to the contributions of the care action to road borders for student education, frequencies and collective subject discourse

<table>
<thead>
<tr>
<th>Central idea/ Frequency</th>
<th>Collective Subject Discourse (CSD)</th>
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<tbody>
<tr>
<td>Action as a source of learning about the prevention of Covid-19 and other diseases / 2</td>
<td>The action contributed to learning about the pandemic and Covid-19, understanding the importance of health education. The project ensured the promotion and prevention not only of Covid; it also addressed other diseases to which the population could be susceptible. It made me understand, in practice, that the prevention of some diseases can greatly reduce the burden on the health system, besides being more profitable. It made me keep studying and updating myself on the virus.</td>
</tr>
<tr>
<td>Opportunity for interprofessional action / 3</td>
<td>By this project, I consider that my training was broader, mainly considering the multiprofessional experience. [...] It helped me to understand the importance of other health professions and the relevance of teamwork. [...] It provided me (as a student) with a better knowledge of the particularities of each profession and how, as a whole, they all add up in a unique manner so that health care is delivered to the &quot;patient/population&quot; in the best manner they can be offered.</td>
</tr>
<tr>
<td>Action as a form of practical application of theoretical knowledge / 2</td>
<td>In college we are often faced with training that does not match the reality of health services; thus, projects like this transform us and show us the true experience in these spaces, besides strengthening the Unified Health System (SUS), since it prepares the professional in a broader manner. It was certainly a wonderful experience, which I will never forget, especially in a period of so much fragility and history in the SUS, besides the practical opportunity to develop anamnesis and diagnosis skills provided by the patrol activities, mobile clinic (container) and Health on the Road. I can also mention the opportunity for personal and professional growth achieved during the four months of activities conducted in the borders of the state of Paraná.</td>
</tr>
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Chart 2. Central ideas regarding the contributions of work at the Covid-19 Information Center for student training, frequencies and collective subject discourse

<table>
<thead>
<tr>
<th>Central idea/ Frequency</th>
<th>Collective Subject Discourse (CSD)</th>
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<tr>
<td>Action as a source of epidemiological data / 1</td>
<td><em>I worked in the control of deaths from COVID-19 in the second region of Curitiba, monitoring deaths, checking medical records and reports, counting the data and contacting the cities and state. My participation was to receive the deaths of cities, hospitals and obituaries, check if they were filled correctly on all necessary platforms and if the patient had a positive diagnosis of Covid-19. From organization of these data in a spreadsheet, the death count was then sent daily to the state and cities, contributing to the daily epidemiological bulletin.</em></td>
</tr>
<tr>
<td>The opportunity for interprofessional work / 3</td>
<td><em>I had the opportunity to work with other professions, exchanging knowledge and learning more every day. [...] during teleconsultations we counseled patients about diet, isolation and preventive measures, and each health profession had the opportunity to contribute to the compaction of guidelines. The dynamics of working in a multidisciplinary team is enriching, since diverse knowledge is acquired, experiences are shared aiming at doing the best for patients and society as a whole. The importance of teamwork, recognizing that each person has an important and fundamental role to perform the activities and, when performed together, they become well elaborated and effective.</em></td>
</tr>
<tr>
<td>The development of communication skills / 3</td>
<td><em>I developed communication skills, the activities conducted at the call center helped me to develop mainly the ability to listen and this helps a lot in the development of production of a complete anamnesis, which is essential in a &quot;teleconsultation&quot;. Since the project was performed during the pandemic period, the importance of defending SCIENCE became clearer and more evident, spreading information and knowledge to the population about habits to prevent the coronavirus spread with accessible and objective language. Working with the telephone service allowed me to expand a diction and resources for communication, besides strengthening the listening, since many times as health professionals we are good at talking and forget that listening is also enriching. It is knowing how to practice EMPATHY, putting yourself in the patients’ shoes and listening to what they have to say, and solutions are often found when we know how to listen to the other.</em></td>
</tr>
<tr>
<td>Opportunities to follow teleconsultations / 1</td>
<td><em>I could follow telemedicine consultations, which considering the current scenario may be a viable, safe and modern alternative for the coming years.</em></td>
</tr>
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</table>
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According to the World Health Organization\textsuperscript{26}, interprofessional education occurs when students from two or more professional areas learn about each other, with others and with each other for collaborative practice and improved health outcomes. Considering the current scenario of the coronavirus pandemic, interprofessional work, articulating collaborative actions to enhance the ability to solve problems, has become even more necessary to maximize the results achieved, evidencing the need to train health professionals...
Another point highlighted by the students was the action in extension as a source of learning and application of knowledge. A study conducted by Fadel et al., evaluating the impact of students' experience in extension activities, also identified the development of professional and personal skills as an important point. That study observed that students perceive, in the extension activity, manners to break with the traditional approach to teaching, promoting greater coexistence, exchange of knowledge, teamwork and a more satisfactory response to the population health needs. In addition, extension actions bring a positive impact to the community, since they provide learning, changes in habits, health promotion and disease prevention, also reflecting on the formation of the future professional.

Moimaz et al., as a result of research conducted with students from the Dentistry course participating in an extension project, also found that the main impacts were receiving stimuli to search for new knowledge and fixing theoretical content in practice; the improvement of technical-scientific and practical knowledge for humanized care; and teamwork.

Another aspect mentioned by the students refers to telehealth and how it can be used, also in the future, in a post-pandemic scenario. The use of telehealth technologies for non-face-to-face pre-clinical care, scheduling, symptom assessment, chat channels and telephone channels were expanded in the current pandemic context. The effective application of telehealth to fight the coronavirus could expand its acceptance to other health areas in the future, including the monitoring of chronic diseases.

When dealing specifically with Teledentistry, this is an important tool to help dental activities by telecare and teleeducation. It is important to note that telecare does not replace face-to-face consultations, being recommended for specific cases, in which the patient has a good understanding and collaboration to perform oral health care at home, in accordance with the guidance received from professionals.

In 2020, the Federal Dental Council published Resolution CFO-226, of June 4, which regulates the practice of distance dentistry mediated by technologies. The aforementioned Resolution forbids its practice for the purposes of consultation, diagnosis, prescription and preparation of a dental treatment plan; admits telemonitoring, by remote monitoring of patients undergoing treatment in the period between consultations; and admits, during the period of public calamity, the teleorientation performed by a dental professional with the objective of identifying, by the application of a pre-clinical questionnaire, the best moment to perform the face-to-face service.

The university extension brings important contributions to the training of dentists, such as broad understanding of the health-disease process, development of practical skills, expansion of resolution, and integral care of the community's needs. The results obtained in the present study reinforce the importance of extension, in the sense of training citizens and professionals committed to health promotion, with the resolution of health services, comprehensive care and with the sanitary and social reality of the country.

5 CONCLUSION

The perception of students participating in this study showed that the main contributions of the Extension Project to their training were the acquisition of new knowledge, opportunity for interprofessional action, practical application of theoretical knowledge, providing professional
experience, technical-scientific learning, promotion of reception, qualified listening and humanized care. Thus, it can be observed that this meets the guidelines for Extension in Brazilian Higher Education, promoting integral and citizen education of students, providing the experience of their knowledge in an interprofessional and interdisciplinary manner.

The role of Dentistry is also highlighted, as a health area, which, along with other health professions, could not be involved in this moment of public health emergency, such as the COVID-19 pandemic. The performance of students in coping with COVID-19 was fundamental to demonstrate them the importance of a universal public system, such as the Unified Health System, as well as that the work process of Dentistry is not limited to oral clinical practice. The interprofessional work present in the project herein reported demonstrates the essential role of all health professionals and students in the population healthcare of the population in the face of COVID-19.

RESUMO
Acadêmicos de Odontologia no combate à COVID-19: percepção discente sobre um projeto de extensão interprofissional
Este artigo tem como objetivo relatar a percepção dos discentes de Odontologia quanto sua participação nas ações extensionistas interprofissionais no enfrentamento da pandemia de COVID-19. Para tanto, foi realizado um estudo qualitativo, transversal e descritivo, por meio de roteiro com perguntas abertas e questionário estruturado autoaplicado, enviado para estudantes participantes no Projeto de Extensão Universitária por meio da atenção às divisas rodoviárias do Estado do Paraná e/ou da atuação como atendentes em serviço de telessaúde para enfrentamento da COVID-19 (Central de Informações COVID-19) e/ou na Farmácia Especial do Estado do Paraná. A análise dos relatos foi realizada por meio do Discurso do Sujeito Coletivo. Todos os estudantes de Odontologia que participaram do projeto aceitaram responder a essa pesquisa. Foram identificadas como principais contribuições do Projeto de Extensão para a sua formação a obtenção de novos conhecimentos, a oportunidade de atuação interprofissional, a aplicação prática dos conhecimentos teóricos, o aprendizado técnico-científico, a promoção de acolhimento, da escuta qualificada e de atendimento humanizado. Deste modo, conclui-se que está atendendo às diretrizes para a Extensão na Educação Superior Brasileira, promovendo a formação integral e cidadã dos estudantes, propiciando a vivência dos seus conhecimentos, de modo interprofissional e interdisciplinar.


REFERENCES


Revista da ABENO • 22(1):1665, 2022 – DOI: 10.30979/revabeno.v22i1.1665
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35. Pizzolatto G, Dutra MJ, Corralo DJ. A
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