

University extension in the professional training of dental surgeons

Gabriela Pizzolatto*; Mateus José Dutra*; Daniela Jorge Corralo**

* Undergraduate student, School of Dentistry, University of Passo Fundo

** Ph.D. Professor, School of Dentistry, University of Passo Fundo

Received: 11/13/2019. Approved: 06/25/2021

ABSTRACT

Universities have transformed over time. The main focus of teaching started to expand with research and extension activities. Extension courses have been increasingly introduced in higher education institutions, participating in the triad that sustains university education. This literature review aimed to show the importance of university extension in the professional training of dental surgeons and society. The strategy for searching articles was based on keywords related to dentistry and university extension, in electronic databases, from August to October 2019. In different communities, the practice of extension strengthens the understanding of students about the health-disease process and allows knowing the economic and social realities of different scenarios, experiencing the public health care network, and participating in the provision of services to the population, which makes students more humanized and able to promote health to their communities. University extension plays an important role in the professional training of dental surgeons, helping them to work competently assisting in the diverse needs of the population, stimulating health promotion and information to the general population who also benefits from these activities, and strengthening the commitment of the university to society.

Descriptors: Community Extension. Community Dentistry. Continuing Education.

1 INTRODUCTION

Throughout its existence, the university has experienced numerous transformations. For a long time, its activities were mainly focused on teaching. Considering the scientific development, investigative activities were introduced to universities, stimulating research

in different areas of knowledge. Moreover, during the XIX century, extramural activities were added to research and teaching, composing the triad that sustains university education: teaching, research, and extension. The latter, in turn, represents an important means by which the university provides

assistance and knowledge to the population, with activities outside the academic environment that are also a source of research, providing feedback to teaching^{2,3}.

The development and expansion of these activities over the last 40 years were mainly leveraged by (1) breaking the isolation of universities and increasing their influence and reputation on society, encouraged by some professors with similar motivations; (2) students needing more practice and training experiences during their education; and (3) searching for knowledge that could help the population to solve their problems and providing information that could contribute to improving the living conditions of society¹.

University extension should be integrated into the curriculum and research organization. Additionally, it must have an interdisciplinary structure, involving political, educational, cultural, scientific, and technological issues, promoting transformations in the institution and society⁴. It is an educational, cultural, and scientific process that makes teaching and research inseparable and provides a transforming relationship between university and society. Therefore, this should not be interpreted as a one-way relationship, in which university knowledge is disseminated to the population, but as a two-way street, in which students and professors also learn, practice, and refine the existing knowledge^{1,2}.

The training of health professionals maintains a strong technicist tendency, which focuses on the disease instead of health promotion. Thus, many undergraduate students become professionals with little understanding of working in this domain. The activities developed in university extension provide students the opportunity to learn about the economic and social realities of their environment and public health services, as well as to participate in the provision of services to

the population, becoming more humanized professionals who better understand the health-disease process and are more trained to promote health in their communities⁵.

Despite the advantages aforementioned, extension is still often seen as a secondary activity not as valued and important as teaching and research. Academic training, however, should not only include technical knowledge but also offer students opportunities to learn from their experiences, practice their learnings, deepen theoretical knowledge, and sometimes reframe it from the extension experience. In other words, extension activities have become essential learning tools for students to develop fundamental skills for their professional activities^{6,7}. Thus, this literature review aims to present the importance of university extension in the training of dental professionals and discuss this importance to society and its role in universities.

2 LITERATURE REVIEW

A search was performed in the SciELO and Google Scholar electronic databases using the keywords “university extension” and “dentistry”. The articles were selected between August and October 2019. The studies considered relevant to the topic in question were included.

The complexity of understanding the health-disease process requires a reflection on the training of health professionals that should include more than just technical skills, which are important for professional practice but not sufficient. It is required to go beyond an instrumentalist and technicist view of knowledge, with universities playing the role of training professionals who are committed and responsible for the world around them⁸.

Despite understanding the importance of a broader social view in professional training, the approach to social health problems does not

cause great enthusiasm and is not valued among students and teachers. In dental education, technical content is usually reproduced in outpatient school clinics, lacking social sensitivity from health professionals and causing them to create a distorted view of the reality of the population and the health care network. Therefore, students must experience different learning scenarios.

The emphasis on technical training is not necessarily harmful but it should not be the only path to knowledge. A curriculum that prioritizes technical content is still the reality of most institutions and does not emphasize the sociocultural and epidemiological aspects of the health-disease process. This teaching model that focuses on healing instead of prevention is not effective for controlling diseases. It is necessary to train professionals as a whole, not only to become dentists but also professional citizens committed to the social development around them^{2,6,8}. The Guidelines for Extension in Brazilian Higher Education established in 2018⁴ aim to regulate academic extension activities, integrating their practice in the curricular components of the courses. Thus, it is expected that, based on their implementation, the positive impact on student training can be reinforced and expanded, reaching a higher number of future professionals.

Training this differentiated and committed professional is a challenge for educational institutions. To achieve this training objective, it is imperative that professionals interact effectively with society to be placed historically and culturally, or refer their technical training to future problems⁹. Universities play the role of training professionals capable of dealing with social needs, working as a team, communicating, being responsive to problems, and generating gain for civilization⁸.

According to Hennington (2005)¹⁰,

university extension programs should demonstrate their importance through the relationship established between the institution and society, thus consolidating from the approach and exchange of knowledge and experiences among professors, students, and the population. This would allow the development of teaching-learning processes based on daily practices and correlated to teaching and research, promoting the confrontation and study of theories learned with the real world of needs and desires.

In the health field, extension activities are particularly important as they are integrated into the health care network and can represent a differentiated space for new experiences aimed at humanization, care, and qualification of health services, as well as facilitate more dynamic and true interactions between students and the community, providing benefits to both parties. Students acquire a more humanistic and social view of their patients, showing affection but not leaving aside the technical aspect of their profession. The result is comprehensive education that allows practicing classroom learnings, building new knowledge, and providing a broader concept of the health-disease process and the current world. Communication is also developed, which is important for the future work life, thus training professionals who are more prepared to deal with people and face the labor market. For the population, these projects provide the opportunity of free learning and improving their health conditions, which favors social changes.

When dentists or other health professionals are restricted to working in the biological field or technical work, it drastically reduces the chances of offering oral health to patients and the community. Additionally, community services motivate students regarding their occupation, as they make learning much more rewarding for helping to improve the

health and quality of life of the population^{6,11}.

Extension courses were introduced in the XIX century in England to promote continuing education, and currently provide opportunities for universities to fulfill their social commitment¹¹. According to the Brazilian Ministry of Education and Culture, extension is an educational, cultural, and scientific process that unites teaching and research and promotes the transforming relationship between university and society⁹. To present social relevance, universities should be culturally engaged, committed to solving social problems, and not renouncing their reflective and active relationship with the world. Thus, the role of extension is articulating the communication between universities and their environments, promoting a fairer and more egalitarian society⁸.

The philosophy of universities is based on three pillars: teaching, research, and service provision; the latter is the one that allows a direct relationship with the community⁶. These activities are indispensable, allowing not only the development of technical and scientific knowledge but also helping the progress of society¹². According to the Brazilian Curriculum Guidelines for Dentistry courses¹³, knowledge of the existing problems in the world, provision of specific services for the community, and extension programs open to popular participation should be encouraged. This interaction provides an exchange of academic and popular knowledge, constituting a relationship of experience exchange, which is an important strategy to transform the health reality of the population^{14,15}. In this context, it is essential that considering the structural and scientific mechanisms of universities, they expand their working areas so there is an exchange with society, playing their fundamental role of producing knowledge⁶. Therefore, while universities develop projects

that work for the benefit of the community, they redeem their social commitment¹⁸.

The extension activities performed by universities represent a way to stimulate the process of change that dentistry has gone through. A large portion of the needy population still believes that their oral health problems, such as caries, followed by extractions, and prostheses, are a fatality that cannot be prevented or a natural circumstance connected to their financial condition. Only dental practice with a work philosophy based on health promotion can change positively this argument. Several extension programs have been implemented in institutions across Brazil, with different practice scenarios and age and social groups. The activities performed involve guidance, prevention, and extension clinics that offer curative and preventive treatments for the population. Moreover, volunteer work complements the training hours⁶. Strengthening the relationship between society and the university provides an improvement in the quality of life of citizens by extrapolating knowledge to other environments beyond the classroom. One of the main objectives of extension programs is social change, which is a progress of universities in line with the community¹¹.

In 1988, section 207 of the Brazilian Constitution called for a reflection from universities so they would articulate teaching, research, and extension activities in an integrative and complementary way, connecting theory and practice. Thus, research develops and improves new knowledge, which is transmitted by teaching and extension activities, making the three pillars of academic training complementary and correlated. The university, through extension, brings knowledge and assistance to the community, which becomes a source of research that consequently provides feedback for teaching². A study by Emmi et al.,

(2018)⁵ analyzed the perception of students and graduates of the School of Dentistry of a university in the state of Pará (Brazil) about the extension activities performed during their training. For this analysis, 36 portfolios of extramural activities were selected between 2009 and 2014. Additionally, five graduates working in the Brazilian Public Health System network (SUS) were interviewed to investigate how extramural activities helped their professional performance, using a qualitative approach. The respondents mentioned that extramural activities helped them to become more human and ethical professionals who care about the health of their patients and value health promotion. They also stated that these activities provided contact with primary care and the public health system, allowing them to develop essential skills and qualities for dentists.

Weiler et al. (2013)¹⁷ analyzed with a quantitative survey the civic benefits of students participating in an extension program (n=390) to support young people at risk compared to students not participating in the project (n=258). Students who experienced extension activities showed greater confidence to work in community service, developed personal and professional skills, could solve problems, and developed greater political awareness. Araujo et al. (2013)¹⁸ also reported that students participating in an extension project, in which services were provided to the community and health promotion activities were performed (involving 12 dental students from a university in São Paulo, Brazil), noticed a difference when compared to those not participating. Their professors also verified more confidence from students in performing clinical procedures and decision-making, working in a more human and critical way¹⁸.

The voluntary activities provided to students in the health field through extension

projects are valuable for training future excellent professionals. Students manage to practice their classroom learnings and acquire new knowledge, both academically and in the community around them, which provides awareness of the social reality and problems of the population. This helps to train dental surgeons who will assist their patients in comprehensive and humanized ways, with greater social and cultural sensitivity, and managing to perform successful prevention and health promotion interventions^{6,15}.

Unfortunately, there are still difficulties regarding the perception of students and professors about extramural activities, which are usually proposed by the Collective Health discipline and seen as secondary activities of lower value for professional training^{19,12}. Oliveira et al. (2016)²⁰ discussed the difficulties in the development of university extension projects by students and found that the issues of preparation, behavior, project continuity, and lack of material resources are limiting and show the lower importance given to these activities compared to other areas of professional technical training. It must be acknowledged that extension activities are not only based on leaving the premises of the university and going to a community without at least understanding its reality. Students must receive training to understand the characteristics, demands, and particularities of the audience with whom they will work. Thus, coping with situations common to society requires technical and professional preparation and the ability to deal with the complexity of human beings²¹.

Universities are currently going through changes arising from questions about their role in knowledge production, making it a challenge to train professionals who are prepared to deal with social needs. Hence, students should be offered activities that help them to become

professionals who can work in multidisciplinary teams, communicate properly, be confident, make decisions in the face of difficulties, and especially can deal with the community of their work, understanding their difficulties and becoming more humanized dentists. However, as discussed by Biscarde et al. (2014)⁸, these characteristics are hardly obtained with the traditional teaching method, in which lessons are transmitted throughout the course and practiced separately in specific clinics for each discipline, making it difficult for students to relate the contents learned, leading them to use knowledge in a fragmented way and not assisting individuals comprehensively. The problem with practices in intramural university clinics is that they may change the view of universities regarding the health care system network. Thus, students should learn in diverse spaces⁸, which contributes to an interaction between society and university, allowing an exchange of knowledge and experiences among the population, students, and professors^{6,8,15}.

Dentistry courses should contemplate both rehabilitation and health promotion practices through extension activities⁶, in which new and different types of knowledge are built, bringing academia closer to society²².

3 CONCLUSION

University extension contributes significantly to train dentists who are prepared to work in the labor market and know how to meet the needs of the population. These activities promote effective interaction of students with the community, turning them into complete professionals who comprehensively see their patients and understand the complex health-disease process in a broader way. Besides benefiting students, extension activities offer the population access to important health knowledge in an exchange of knowledge that contributes to the growth of both parties.

RESUMO

A extensão universitária na formação do cirurgião-dentista

As universidades têm se transformado ao longo dos tempos. O foco principal no ensino foi sendo ampliado com ações de pesquisa e de extensão. Esta vem ganhando cada vez mais espaço nas instituições de ensino superior, fazendo parte da tríade que sustenta a formação universitária. O objetivo desta revisão de literatura foi mostrar a importância da extensão universitária na formação profissional de cirurgiões-dentistas e para a sociedade. A estratégia de busca de artigos se deu por palavras-chave relacionadas à Odontologia e à extensão universitária em bases de dados eletrônicas, no período de agosto a outubro de 2019. A prática da extensão, em comunidades diversas, fortalece a compreensão dos estudantes quanto ao processo saúde-doença, permite conhecer a realidade econômica e social em diferentes cenários, permite vivenciar a rede de serviços públicos de saúde, assim como participar da prestação de serviços à população, tornando-os mais humanizados e capacitados a promover a saúde da comunidade em que estão inseridos. A extensão universitária tem um importante papel na formação profissional do cirurgião-dentista, colaborando para que atue de forma competente para contemplar as diversas necessidades da população, estimulando ações de promoção de saúde e informação à população em geral, que também se torna beneficiada com estas ações, e fortalecendo o compromisso da universidade com a sociedade.

Descritores: Extensão Comunitária. Odontologia Comunitária. Educação Continuada.

REFERENCES

1. Coelho GC. O papel pedagógico da extensão universitária. *Em Ext.* 2014; 13,(2):11-24.
2. Pivetta HFP, Backes DS, Carpes A, Battistel ALHT, Marchiori M. Ensino, pesquisa e extensão universitária: em busca de uma integração efetiva. *Linhas Críticas.* 2010; 16(31):377-90.
3. Moimaz SAS, Gomes AMP, Bordin D, Garbin, CAS, Saliba NA. Extensão

- universitária como ferramenta geradora de ensino-aprendizagem e produtora de pesquisa. *Revista Conexão UEPG*. 2015; 11(2):140-149.
4. Brasil. Ministério da Educação. Conselho Nacional de Educação. Câmara de Educação Superior. Resolução no. 7, de 18 de dezembro de 2018. [Cited: July 24, 2021. Available from: http://portal.mec.gov.br/index.php?option=com_docman&view=download&alias=104251-rces007-18&category_slug=dezembro-2018-pdf&Itemid=30192.
 5. Emmi DT, Silva DMC, Barroso RFF. Experiência do ensino integrado ao serviço para formação em Saúde: percepção de alunos e egressos de Odontologia. *Interface*. 2018; 22(64):223-36.
 6. Pereira SM, Mialhe FL, Pereira LJ, Soares MF, Tagliaferro PS, Meneghim MC, Pereira AC. Extensão universitária e trabalho voluntário na formação do acadêmico em Odontologia. *Arq Odontol*. 2011; 47(2): 95-103.
 7. Ponte CIRV, Torres MAR, Machado CLB, Manfroi WC. A extensão universitária na Famed/UFRGS: cenário de formação profissional. *Rev Bras Educ Méd*. 2009; 33(4):527-34.
 8. Biscarde DGS, Santos MP, Silva LB. Formação em saúde, extensão universitária e Sistema Único de Saúde (SUS): conexões necessárias entre conhecimento e intervenção centradas na realidade e repercussões no processo formativo. *Interface*. 2014; 18(48):177-86.
 9. Fórum de Pró-Reitores de Extensão das Universidades Públicas Brasileiras e pela Secretaria de Educação Superior do Ministério da Educação e do Desporto. Plano Nacional de Extensão Universitária. 2000-2001:17.
 10. Hennington ÉA. Acolhimento como prática interdisciplinar num programa de extensão universitária. *Cad Saúde Pública*. 2005; 21(1):256-65.
 11. Rodrigues ALL, Prata MS, Batalha TBS, Costa CLN, Neto IFP. Contribuições da extensão universitária na sociedade. *Cad Grad Ciênc Hum Soc*. 2013; 1(16):141-8.
 12. Borato A, Pereira MVS, Bordin D, Martins AS, Fadel CB. Valoração das práticas de ensino, pesquisa e extensão entre concluintes de Odontologia. *Rev Abeno*. 2018; 18(1):103-15.
 13. Brasil. Ministério da Educação. Conselho Nacional de Educação. Câmara de Educação Superior. Resolução no. 3, de 19 de fevereiro de 2002. [Cited: July 24, 2021. Available from: http://portal.mec.gov.br/index.php?option=com_docman&view=download&alias=192671-rces003-02&category_slug=junho-2021-pdf&Itemid=30192.
 14. Cruz BPA, Melo WS, Malafaia FCB, Tenório FG. Extensão universitária e responsabilidade social: 20 anos de experiência de uma instituição de ensino superior. *RGSA*, 2011; 5(3):3-16.
 15. Fadel CB, Bordin D, Kuhn E, Martins LD. O impacto da extensão universitária sobre a formação acadêmica em odontologia. *Com Saúde Educ*. 2013; 17(47):937-46.
 16. Falcão EF. Vivência em comunidade outra forma de ensino. Editora da UFPB, 2014. 208p. ISBN: 978-85-237-0856-6
 17. Weiler L, Haddock S, Zimmerman TS, Krafchick J, Henry K, Rudisill S. Benefits derived by college students from mentoring at-risk youth in a service-learning course. *Am J Commun Psychol*. 2013; 52(3-4):236-248.
 18. Araujo RM, Feitosa FA. Articulando o ensino de graduação em odontologia com a extensão universitária. *Rev Ciênc Ext*. 2013; 9(3):115-24.
 19. Toassi RFC, Baumgarten A, Warmling CM,

- Rossoni E, Rosa AR, Slavutzky SMB. Teaching at primary healthcare services within the Brazilian National Health System (SUS) in Brazilian healthcare professionals' training. *Interface*. 2013; 17(45):385-92.
20. Oliveira FLB, Almeida Júnior JJ, Silva MLP. Percepção dos acadêmicos em relação às dificuldades no desenvolvimento de projetos de extensão universitária. *Rev Ciênc Ext*. 2016; 12(2):18-25.
21. Ribeiro RMC. A extensão universitária como indicativo de responsabilidade social. *Diálogo*. 2011; 15(1):81-8.
22. Divino AEA, Costa CLNA, Oliveira CEL, Costa CAC, Neta HRS, Campos LS, et. al. A extensão universitária quebrando barreiras. *Cad Grad Ciênc Hum Soc*. 2013; 1(16):135-140.

Correspondence to:

Gabriela Pizzolatto

E-mail: gabrielapizzolatto@gmail.com

Rua Moron, 1427

99010-032 Passo Fundo/RS Brazil