Teaching and public health services interacting in formative processes in Dentistry: an integrative review

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ABSTRACT

The aim of this study is to identify, from an integrative review, the results of formative experiences of teaching-service-management-community integration, at the undergraduate, graduate or permanent education level, relevant to Dentistry. A total of 104 articles were identified in the SciELO Citation Index database, integrated to the Web of Science platform and using the keywords that define the object: teaching care integration service, teaching, service, professional training, higher institution, permanent education, teaching-service integration, which were combined with Boolean operators (and) and refined with each other and also with regard to the term Dentistry. After excluding repetitions and quantitative or clinical studies, 30 studies were included classified as qualitative, quali-quantitative, reviews or experience reports. The Standards for Reporting Qualitative Research - SRQR, a guide with 21 recommended criteria for qualitative research was applied, based on the expectation that favorable contributions identified in these studies can be recognized by peers and serve as a reference for the construction of an agenda committed to health training, based on the principles of the Unified Health System.

Descriptors: Teaching Care Integration Services. Unified Health System. Teaching. Dentistry. Review Literature as Topic

1 INTRODUCTION

The constitutional precept that provides for the role of the Unified Health System (SUS) as a human resources teacher is consolidated the more integrative the collaborative actions between training institutions and health services are.

On-the-job training, through supervised educational actions, aims at preparing students who are attending mainstream school in institutions of higher education – in the form of internships, or professional education – such as residencies, specializations, improvement or permanent education programs.

The National Permanent Health Education Policy (PNEPS) shows that the demands for the training and development of workers in the SUS exceed the limit of specific or individual needs for updating or the capacity of supply and expertise of an educational institution, and must consider, mainly, the daily problems related to health care and work.
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organization\(^1\).

For Pires and Botazzo (2015)\(^2\) the technological organization of work constitutes one of the nodes for health practice and it is reflected in the formative process – or is a result of this process, whether at the undergraduate, graduate or permanent education level.

Therefore, bringing students, teachers, professionals and the community together and link them to a health service allows it to be recognized as a pedagogical space, capable of producing reflections and actions that, by expanding the capacities and perceptions for teamwork, culminate in a more comprehensive health care practice, more compassionate in the way of intervening in the health of the population\(^3\).

Thus, the idea of the health education training quadrilateral is inserted, which, based on a collegiate management proposal, through a group dynamic, proposes to build and organize an education responsible for interactive processes and action in reality\(^4\).

The aim was, therefore, to identify, from an integrative review, the results of formative experiences of teaching-service-management-community integration, at the undergraduate, graduate or permanent education level, relevant to Dentistry, so that they can inspire other initiatives.

2 LITERATURE REVIEW

This is an integrative literature review, carried out in the SciELO Citation Index (SciELO CI) database, integrated into the Web of Science (WoS) platform, one of the biggest databases that provides access to more than 12,000 titles of journals, but whose access is limited to some educational institutions\(^5\).

The integrative review allows the combination of data from theoretical and empirical literature, with the inclusion of experimental and non-experimental investigations, primary and secondary data, in order to understand a phenomenon more broadly. This fact, considered as an advantage for the use of the method, also limits its application when making comparisons, which are not always possible due to the heterogeneity of the studies\(^6\).

It consists of six distinct phases: 1) Identification of the theme and selection of the hypothesis or research question for the elaboration of the integrative review; 2) setting standards for inclusion and exclusion of studies/sampling or literature search; 3) definition of the information to be extracted from the selected studies/study categorization; 4) assessment of the studies included in the integrative review; 5) interpretation of results, and 6) presentation of the review/synthesis of knowledge.

With a view to answer the investigative question, keywords that define the object were chosen: teaching care integration service, teaching, service, professional training, higher institution, permanent education, teaching-service integration, which were combined with Boolean operators (and) and refined with each other and also with regard to the term Dentistry.

A text file was created with the selected references and respective abstracts. There was no time or language limitation for the search. Duplicate publications were excluded, as well as those that did not apply to training and national experiences. It was also decided to exclude quantitative research, as the focus was maintained on assessing the quality of the studies included in the integrative review, by applying the Standards for Reporting Qualitative Research - SRQR, a guide with 21 criteria recommended for qualitative research\(^7\).
Some elements were also observed to guide the analysis regarding the population of studies (such as level of education – undergraduate, graduate or professional); regarding the possible comparison between specific population groups; regarding the action developed or intervention performed (as a form of insertion – undergraduate courses, internships, extension projects, continuing education; uniprofessional or multiprofessional approach; scope) and regarding the outcomes of the studies (results, contributions and developments).

Among the searches carried out, 104 articles were found, from which the selection process was performed according to figure 1. As there was no period restriction, articles published between 2005 and 2021 were found. There were also no restrictions regarding language, articles were found in Spanish, English and Portuguese.

Figure 1. Study selection process

An article was excluded because only the abstract was available, which would prevent it from being read if it met the selection criteria. All repetitions were excluded. Of the 68 remaining articles, one was excluded for not describing a national experience, and another 31 articles were excluded for dealing with clinical research or for not having a direct relationship with the formative process and the integration of teaching-service-management-community, the subject of interest of this study; It was also decided to exclude 6 articles of quantitative methodology. The 30 remaining papers were read in full.

The 30 articles included in the
integrative review were classified by the type of work (qualitative, quali-quantitative research, reviews or experience reports), as to the audience to which they referred (undergraduate students, graduate students, preceptors, managers, teachers, coordinators of higher education institutions or higher education professionals) and as to the study approach (uni- or multiprofessional).

Among the selected studies, 16 are qualitative, 5 are quali-quantitative, 5 are experience reports, 3 are literature reviews, and 1 is a validation study of an instrument for evaluation of undergraduate health courses.

In relation to the target audience, 19 studies involved students, 17 undergraduate students and 2 multiprofessional residency students; 6 involved professors from higher education institutions. The other articles involved health professionals, dentists or not, coordinators of Dentistry courses at Brazilian higher education institutions, and students from non-dental health areas. As for the study approach, 21 articles were uniprofessional, focused only on the dental area, and 9 articles presented a multiprofessional approach, with other health areas covered in the work.

As for the scope of the studies, 13 sought to analyze the perception of undergraduate dental students regarding extramural internship in the Unified Health System and its impact on future practice. Two studies did the same with Dentistry residents. One study focused on the preceptors’ view of these internships in the SUS.

Extracurricular experiences, such as the Education through Work for Health Program – PET-Health, were addressed in two papers, one an experience report and the other a qualitative study.

Two studies addressed the training of health professionals and the profile of skills necessary to work in the Unified Health System in view of the Reorientation Program for Vocational Training in Health – Pro-Health, and another sought to describe the implementation of a teaching network-assistance, a reflection of its deployment phase.

Four papers were related to some analysis of the National Curricular Guidelines and the Political-Pedagogical Projects of courses in the health area.

A literature review analyzed the advances and challenges of oral health after the first decade of the Programa Brasil Sorridente (Smiling Brazil Program). Two studies addressed issues related to the work process in the Family Health Strategy and two addressed issues directly related to permanent education.

Then, the completeness of the works was evaluated based on the SRQR criteria, according to chart 1. It was observed that the analyzed papers met most of the recommended requirements, with clear contexts, study purposes, and research questions. It was also found that there is some difficulty in presenting and justifying the type of qualitative approach used and, when applicable, the basic theory of the study. However, it is noteworthy that the SRQR acts as a guide to assist authors and readers in writing and interpreting qualitative methodology research, indicating that the studies included in this integrative review are supported by the scientific community and their results can be sustained.

The importance of teaching-service integration in Brazil was highlighted at the First National Conference on Human Resources for Health, held in 19868. It was determined, on this occasion, the need to reorganize work management and health
education policies, through teaching-service integration and assistance models located in concrete spaces-populations.

In 2002, the no. 3 Resolution of the National Council of Education/ Higher Education Chamber (CNE/CES) established the National Curriculum Guidelines (DCN) for undergraduate courses in Dentistry. They foresaw the strengthening of the articulation between theory and practice, emphasizing health promotion, prevention, recovery and rehabilitation, with emphasis on SUS guidelines; and provided for the desirable profile of the trainee: a generalist professional, with a humanistic, critical and reflective background, with an understanding of the social, cultural and economic reality of their environment, who acts in a way aimed at transforming reality for the benefit of society, in addition to other competences. Nevertheless, what is still seen is a training oriented towards individualistic and technistic practice.

The very articulation between theory and practice achieved in the SUS’s settings cannot be reduced to the application of techniques, in which the health establishment is just another place of care practice for the student to do “more of the same” but must mean an interaction between the different knowledge – of professionals, students and the community.

If the text of the guidelines could bring encouragement to those who bet on this training, and who have borne fruit in political pedagogical projects in educational institutions across the country, it is understood that their application was not immediate or even took place in its entirety. There is a lack of knowledge and distrust of teachers and students, but an understanding that alignment between the DCN and the political pedagogical projects of the courses is necessary. Not surprisingly, the courses with lesser degree of adhesion to the DCN were those that showed incipient teaching-service-community integration.

In addition to the DCNs, renewed with the approval of a new version in 2021, in which the stimulus to teaching-service integration was maintained, induction programs of the Ministries of Health and Education were important initiatives for this approximation. The precepts established by the National Program for Reorientation Program for Vocational Training in Health – Pro-Health, aligned to the National Curricular Guidelines, have brought greater representativeness to the partnership between the University and public health services. Academic and financial incentives for higher education institutions, brought by the Education through Work for Health Program – PET-Health, have fostered the formation of tutorial learning groups of collective and interdisciplinary nature and, consequently, the teaching-service-community integration.

In the articles that addressed the activities in PET-Health and the opinion of the students about their impact on training and professional performance, it was observed that the perceptions were positive, and the students highlighted the opportunity to articulate theory and practice in the field, to know the functioning of the Unified Health System and to seek autonomy to solve the problems encountered. The appreciation of the students’ experience is in line with what was recommended by the program in its axis, which dealt with practice scenarios, with the consequent exposure of students to the real problems of work.
Professors and coordinators of courses in the health area recognized the power of teaching-service-community integration for a training capable of transforming health care processes, however, they identified that, to do so, it is necessary to overcome resistance from the faculty and make teaching more flexible, creating possibilities for interdisciplinary and multiprofessional activities, institutionalizing the interaction.\textsuperscript{11,15} 

Institutionalization, as an imposing measure, may not bring the intended benefits, especially when weaknesses are identified in the teacher training itself. In this case, the supervision shared with the network professional who welcomes the students in

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the practice scenarios - the preceptors, can be a better used alternative.

Preceptors articulate the knowledge and values of school and work. When valued by municipal management, they participate in planning and agreement, assuming the commitment and co-responsibility for student education and recognizing this practice as a process of continuing education, capable of transforming community-centered practices\(^{16}\).

This professional valorization must be ensured by management, recognizing the instituted policies and, in this sense, the proposal of ‘institutionalization’ is understood as an alternative to firm the commitment between the educational institution and the health services, in an exchange relation\(^ {13, 16}\), as occurred in the project to train dentists as facilitators in Permanent Education on STD/HIV/AIDS\(^ {18}\).

Since the launching of the National Oral Health Policy guidelines in 2004, a literature review pointed to advances in permanent education actions, especially with training for dental surgeons who joined family health strategy teams, but which still require efforts to expand the engagement of managers and professionals\(^ {19}\).

Professors who have accompanied students in activities that interact with the public health services, in their great majority, identified this interaction as contributing to their education. The greatest difficulties were mentioned by the professors from the Dentistry course, and they referred mainly to aspects linked to the educational institution or to the training itself, and mentioned resistance from the teaching staff\(^ {15}\), probably referring to others who do not participate in such activities. The course coordinators from another institution said that the main difficulty for interaction referred to the receptivity of the students by the service and by the professionals linked to it\(^ {11}\).

Weaknesses in teacher training - whether recognized by the teachers themselves or attributed to others or by others is a key point. These individuals are responsible for conducting the training process of students who will be future professionals in the public service network - whether they remain at the ‘top’ or ‘management’ of services and policies, or future teachers. In a literature review study, Diógenes et al. (2010)\(^ {20}\) already warned about the need to rethink teacher training so that it is prepared to combine technical excellence with social relevance and to encourage partnerships between educational institutions, services and the community.

A historical review of the role of university professors, their identity and the ways in which their training has taken place over time has identified that the training of professors in the health area, particularly in Dentistry, is marked by the absence or insufficiency of didactic and pedagogical training. It must be associated with technical and specialized knowledge, pedagogical, philosophical, political and humanistic knowledge, understanding transformation as a long-term political process, not imposed because it generates resistance, but from initiatives capable of generating ruptures in the vicious circle of the postgraduate evaluation system – producers of new professors and the fragmented and technified training system\(^ {21}\).

When the focus turns to the students’ perspective and to the impact of the extramural activities offered to them, several important points foster discussion. As for the practice settings, it is recognized that the insertion of students in the SUS follows the recommendation of the DCN, starting with services of less complexity, which increases as the student progresses through the undergraduate course\(^ {22}\). In this way, Primary Health Care (PHC), and therefore the Family Health Strategy (FHS), have provided opportunities for extramural teaching-learning experiences, enabling students to see PHC as a space for creation and invention in the development of health promotion educational practices and an expanded clinic, which bring
together the health service, the community and academic training. Considering this integration, it is recognized that the training that unfolds in the practice scenarios does not eliminate conflicts but breaks barriers and strengthens dialogicity\textsuperscript{24}.

Linked to this is the concept of “meaningful learning”, which, when applied to the supervised internship, is configured as a link between theory and practice, in which the professional identity is built because it is a rich learning space. Its main outstanding aspects would be: the student’s protagonism in the teaching-learning process, the accumulation of experiences and knowledge and the appropriate theoretical-conceptual support\textsuperscript{24}. The teacher, in turn, is responsible for, in addition, supervising the student at the internship site, and for questioning the experiences lived, facilitating their significant learning process\textsuperscript{14}.

The beginning of the student’s experience in the fields of practice is permeated by concerns, since they don’t know what challenges and situations they may face, and also by idealizations and preconceptions, which denote the idea that the public service is a limited service, of low quality, a poor service for poor people\textsuperscript{8,9,14}. They expected to find low quality material or even not find enough material for the amount of clinical care required\textsuperscript{22,23}.

However, the internship allowed the demystification of the public service, as the evaluations carried out at the end of the activities highlighted a positive surprise with the experiences and the structure of the services. It also made it possible to know different realities of the environment of the educational institution, of the intramural, controlled and restricted environment, to promote reflections and important experiences for the students about the practical experience in the SUS, about the social reality, teamwork, the benefits of incorporating an external scenario to the college and on the teaching-learning process\textsuperscript{9,24}.

Internships provide students with a mature understanding of the SUS as a unique space for the development of educational practices and health promotion, which stimulates creativity and innovation and, at the same time, demands pedagogical proposals that mobilize knowledge from an active positioning of the student\textsuperscript{24}. It allows to identify and become familiar with the organization and management of the system, strengthening the positive points and reflecting on the limitations, identifying potentialities and becoming a possible agent inducing changes both as a human being and in work processes\textsuperscript{8}. It favors the establishment of bonds, a humanistic and comprehensive approach to the health-disease process, autonomy to solve problems, to work in a multidisciplinary team, allowing critical analysis and reflection on topics such as humanization\textsuperscript{8,9,24}.

Supervised internships are a significant space in the construction of the profile of the Dentistry professional intended by the DCN\textsuperscript{8}. The dynamics of traditional training in Dentistry, where the student is seen as a “blank page” and the teacher as the “transmitter of knowledge” hinders both critical thinking and the autonomy to build their own knowledge by the student. The internship can, then, be configured as a way to free oneself and become independent, by being “away” from the teacher’s eyes\textsuperscript{22,25}. In activities in which the student is placed in the role of protagonist, students see the possibility of being responsible for all stages of dental treatment, from planning to completion, as an opportunity to autonomously perform in clinical practice what was learned and performed in previous periods. The constant presence of the teacher during clinical classes in the undergraduate course seems to inhibit students, generating a feeling of insecurity and inability to solve problems\textsuperscript{22}.

The process of building the individual’s autonomy must be correctly stimulated by preceptors, professors and supervisors, who often do so through the use of active methodologies and the adoption of other instruments that stimulate reflection, independent and critical thinking and the
correlation between theory and practice. Among the possibilities found are portfolios, case studies, field diaries and reports. Portfolios can be understood as facilitating instruments for the construction and reconstruction of the teaching-learning process, as they allow the student to reflect on the local reality, identifying problems and critically analyzing them. This process stimulates questioning, discussion, supposition, proposition, analysis and reflection, making students learn more and more, being active participants in the learning process. Thus, the reflection provided by the construction of the portfolio can be used as an instrument of learning and change in professional training. Case studies were used to articulate theoretical knowledge with practice and to provide a reflection on the facts presented, mainly through problematization. The field diary can be adopted as a monitoring tool for the student who, by recording personal impressions and feelings from observations and experiences of practical activities, describe their daily experiences, recording attitudes, facts and phenomena perceived in the internship field. The field diary is a form of personal annotation developed from contact with reality and perceived experiences. In general, during the internship, the student is faced with a social reality that can often be shocking, triggering situations of anguish, personal conflicts and ethical dilemmas. The field diary, in addition to favoring the teacher-student relationship, also allows the student, when describing the situations experienced, to process and order facts and feelings, providing a moment of fundamental reflection for their understanding. The field diary as a methodological instrument also represents a form of socialization of lived experience and knowledge. Finally, the activity report can demonstrate, explain and discuss the lived experience, focusing on the theoretical basis that guided the activities. It should also include the process of recognizing the reality (diagnosis of the living and health conditions of the population served at the Health Units); the planning process (proposition and description of the application of plans and projects) and the conclusion (must provide the argumentation of the use and importance of the internship experience for the student’s professional life). It can also point out recommendations, suggestions and new work proposals.

In analyzing Dentistry training, it was noted that most of the studies that addressed the teaching-service-community integration related it to a context of curricular restructuring, where an attempt was made to bring students closer to public health services and shorten the distance between the academy and such services. Among the main challenges for adequate health training is the effective articulation between sectors that manage higher education institutions (HEIs) and health institutions, seen as different worlds (teaching and work). Often, in the planning required for a good use of internship activities, the demands of the university may not match the reality of the service. It is observed, then, that transforming professional training requires profound changes that imply changes not only in conceptions and practices, but also in power relations in universities, in health services and in the field of policies.

In the quadrilateral of training, the community-related component should be seen as something different from the interaction with the population - in which specific groups are prioritized for clinical care or for educational activities by introducing the notion of relevance and social responsibility of teaching. The “community-based education” concept defines the opportunity to learn with and in the community and the social responsibility of the training apparatus is interpreted as one that, among other aspects, perceives the community and its users not as mere repositories of good intentions and academic actions, but as effective partners with an active voice on essential issues that concern their health conditions, the respective determinants and,
therefore, their lives24.

3 CONCLUSIONS

Restricting the review to qualitative studies, although it excluded quantitative articles that would bring good elements to the discussion on the teaching-service-management-community integration, had the intention of confirming, from the SRQR, the success of such experiences in Dentistry training.

It is also assumed that many other training initiatives based on social responsibility, in defense of the SUS and the commitment to the integral health of the population, were not found because they were not published in vehicles indexed in the chosen database, and perhaps because they were not identified by the selected keywords.

The call for the reorganization of work management and health education policies is not recent, as well as the guidelines, programs and policies for their implementation. Most of the changes were linked to undergraduate teaching, with immediate benefits for student training, but the same is still to be desired for teachers, as well as greater reciprocity in actions involving the quadrilateral for the construction of an agenda committed to health training, based on the principles of the Unified Health System.

RESUMO

O ensino e os serviços públicos de saúde interagindo em processos formativos na Odontologia: revisão integrativa

O objetivo do estudo é identificar, a partir de uma revisão integrativa, os resultados de experiências formativas de integração ensino-serviço-gestão-comunidade, em nível de graduação, pós-graduação ou educação permanente, pertinentes à Odontologia. Foram identificados 104 artigos na base de dados SciELo Citation Index, integrada à plataforma do Web of Science e, utilizando-se os unitermos que definem o objeto: ensaio de integração docente assistencial, ensino, serviço, formação profissional, instituição superior, educação permanente, integração ensino serviço, as quais foram combinadas com operadores boleanos (and) e refinadas entre si e também com o termo Odontologia. Após exclusão das repetições e de estudos quantitativos ou clínicos, foram incluídos 30 trabalhos classificados como qualitativos, qualiquantitativos, revisões ou relatos de experiência. Aplicou-se o Standards for Reporting Qualitative Research - SRQR, guia com 21 critérios recomendados para pesquisas qualitativas, na expectativa de que contribuições favoráveis apontadas nestes estudos sejam reconhecidas pelos pares e possam servir de referência para a construção de uma agenda comprometida com a formação em saúde, pautada nos princípios do Sistema Único de Saúde.


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