Original Article

Integrating Curricular Scenarios in the Dentistry Course: the Academic Disciplines of Dental Clinic and Dentistry and Society

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Abstract

Objective: Analyze the contributions of integration of the Dental Clinic (DC) and the academic discipline of Dentistry and Society (DS) in training students in the course.

Material and Methods: The method used was a qualitative approach, with analysis of documents and semi-structured interviews with students, professors, and patients. The Bardin thematic analysis technique was used to obtain results. Results: Positive impacts were related to the possibility of a more comprehensive approach, emphasizing the human aspects of patient care. Stress points were related to the routine of the dental clinic, patient screening, integration of professors from different areas, communication, and lack of student commitment. Conclusion: The proposal for integration of the DC and of the DS academic discipline is innovative in relation to academic training, with progress in overcoming the fragmented perspective of the dentistry student, allowing greater emphasis on the human aspects of patient care. Nevertheless, it was observed that implementing an integrated course plan is a slow process that depends on the engagement and commitment of those involved to move beyond the traditional educational model centered exclusively on physical cure and technical activity.

Keywords: Dental Clinic; Public Health, Curriculum.
**Introduction**

The National Curriculum Guidelines for the dentistry course, implemented in 2002, indicate the need for Brazilian dental schools to reformulate their Pedagogical Course Plans (PCP) and their curricular foundations considering inclusion of more problem-based pedagogical points of reference, expansion of settings for learning, interdisciplinarity, a more comprehensive approach to health, technical and scientific stringency, and formation of a new professional profile that is judicious, reflexive, and transformational [1].

In 2004, the dentistry course of a university branch institution in Anápolis, Goiás, Brazil, began a change in its Pedagogical Course Plan (PCP) considering the following points of reference: respect for institutional identity, collective decision making, interdisciplinarity, and establishment of a solid overall educational formation. Further aims were a commitment to promoting health with a focus on the overall population, production of knowledge, building student intellectual autonomy, interactive problem-based methodologies, research as a part of the educational process, linkage of theory and practice, and an emphasis on humanistic educational formation [2].

In this new curricular model, contents are placed together according to their epistemological foundations in common core areas. There are no longer self-contained academic disciplines as in traditional curricula. Four curricular core areas were created with the aim of overcoming traditional fragmentation, and these core areas are present throughout the years of the course, namely: Dental Clinic (DC), Oral Medicine (OM), Scientific Investigation (SI), and Dentistry and Society (DS); connecting the content of the basic educational and professional activity cycles is a point of reference.

Dental Clinic and Oral Medicine are related to knowledge and clinical practices in dentistry, including the basic and professional activity academic disciplines. Scientific Investigation is involved with content related to the foundations of research, and Dentistry and Society has two dimensions: public health policy and dental administration. The public health policy dimension was designated in the new PCP as the “Interdisciplinary Health Policy Project” (“Projeto Interdisciplinar de Políticas de Saúde” - PIPPS). The PIPPS is centered on teaching-service partnerships with field activities within the scenario of the Family Health Strategy (Estratégia Saúde da Família - ESF) from the first to the seventh semester of the course and with SUS management in the eighth semester. The Arch Method of Maguerez [3] was adopted as the methodological axis of these core academic disciplines, and a problem-centered approach, reflection, and action serve as points of reference (Table 1).

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<tr>
<th>Table 1. Activities in the Field of Dentistry and Society – Interdisciplinary Public Health Policy Project (PIPSS)</th>
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<td><strong>PIPPS I (1st semester)</strong> – Students are urged to immediately become acquainted with the reality of SUS. Proposed practices are visits to different Family Health Units (Unidades de Saúde da Família - USF) in the municipality of Anápolis. In this experience, the student observes and analyzes the routine of the USF and is able to collaborate in small tasks in accordance with the guidance of instructors.</td>
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<td><strong>PIPPS II (2nd semester)</strong> – Health education projects are carried out in daycare centers/nursery schools and municipal primary schools in the city of Anápolis.</td>
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<td><strong>PIPPS III (3rd period)</strong> – Students deepen their understanding of structure, organization, philosophy, and</td>
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practices of the Family Health Strategy. Based on the Arch Method of Maguerez, students will begin the phase of **observation of reality** in the areas of the Family Health Units in different neighborhoods. The point of reference used for this phase is the “rapid estimation technique”.

**PIPPS IV (4th semester)** – The Arch Method of Maguerez will continue through consideration of the “observation of reality” phase of the previous period. The following phases are now undertaken: **survey of key points, theorization, and solution hypothesis**. Solution hypotheses should be based on **health promotion** as a point of reference and foresee actions to be carried out in the family environment (PIPPS V) and in the collective environment (PIPPS VI and PIPPS VII).

**PIPPS V (5th semester)** – In this period, the **application to reality** phase will be carried out, executing the Health Promotion Project (hypotheses for solution) in the **family environment**. Health education activities are prioritized in households. The point of reference of these educational activities should be a **problem-centered approach**. In addition to family learning, the aim is for students to create bonds and become aware of different family issues. The curriculum core subjects of Psychology and Spirituality collaborate toward reflection on family reality. An important fact in this semester is the beginning of clinical treatment for the families that were prioritized for **Dental Clinic care** of the School of Dentistry.

**PIPPS VI, VII (6th and 7th semester)** – In these semesters, the **application to reality** phases occur, executing the Health Promotion Project in the **collective environment** (schools, daycare centers, shelters, and other social institutions). Founded on an **expanded concept of health, potentialization, community participation, and intersectorial cooperation**, students will form partnerships to carry out the proposed activities. Families will continue being cared for at the **Dental Clinic**.

**PIPPS VIII (8th semester)** – This semester is dedicated to management experiences in SUS (municipal, state, and federal sphere). Students visit areas under management of SUS and carry out studies regarding this reality considering several themes: social control, epidemiological monitoring, health inspection, regionalization and hierarchical structure, and the comprehensiveness of SUS. The methodology used is observation, interviews, visits, studies, etc. Families will continue being cared for at the **Dental Clinic**.

With the new PCP, and comprehensiveness and resolvability serving as points of reference, the aim was to broaden family care and create closer contact of the DC with the community involved in the PIPPS. The DCNs (National Curriculum Guidelines) reaffirm that “the student should act at all levels of health care, through involvement in programs for promotion, maintenance, prevention, protection, and recovery of health, receptive to and committed to the human person, respecting and valuing each one”. In regard to health care, the document recommended that “the responsibility for health care is not complete through the technical activity, but rather with resolution of the health problem, on both an individual and collective level” [4].

Thus, many families that were visited by the students and that participated in health education activities in the PIPPS came for care in the DC. A new link is established with patients because, in this case, the students knew their household and family situation and were nearer the psychosocial issues involved in this universe. This gave rise to a different practice in relation to the other patients that arrived through the screening processes of the DC.

In general, the DC is focused on specific areas, restricted to integrating different clinical specialties. In the traditional DC, the student deals with the patient with a focus on dental care and frequently does not know the patient’s context of life and consequent social, cultural, educational, and economic issues [5,6]. With implementation of the Dentistry DCN, increasingly, there are proposal that aim to promote interaction and connection of the student with the community and the multiprofessional health team in order to obtain comprehensive care focused on the human person.
Nevertheless, there are few studies that analyze the interrelation among the dental clinic, SUS, and oral health [9].

The aim of this study was to analyze the contributions of the proposal of integration of the Dental Clinic (DC) and the content of Dentistry and Society (PIPPS) in the educational formation of the students of the School of Dentistry of the Centro Universitário UniEvangélica (UniEvangélica University).

Material and Methods

The methodology used in this study was a qualitative approach. In this methodology, emphasis is not given to numerical and randomized representation for generalization of a sample in the population, but collection of sufficient information for reconstruction of discourse, which allows deeper analysis of subjectivity, involving the core question of the theme under study [10].

Field research was carried out with students, patients, and professors involved in the DS and DC academic disciplines. Students in the seventh and eighth semesters of the dentistry course who had cared for patients (for at least a semester) that are part of the families visited in the DS projects (PIPPS) participated. Students had necessarily visited the patients’ household.

The patients chosen were those that were part of the families visited by the students of the fifth semester and that were being cared for in the DC. Professors active in the DC or in the DS and that advised the students were also invited to participate in the study.

Interviews were carried out with the consent of the administration of the dentistry course using semi-structured questionnaires. All the interviews were recorded and later transcribed. Since the study involves human beings, the Regulatory Guidelines and Standards of the National Health Advisory Board, Resolution 196/96, were followed. The research project was submitted to the review of the ethics committee of the Centro Universitário UniEvangélica and was approved (Protocol no. 001/2009).

Participants in the study were six students, six patients, two professors from Dentistry and Society (PIPPS) and five professors from DC. The names of the students, patients, and professors were changed to maintain their anonymity.

The technique of theme analysis according to Bardin [11] was used for data analysis. The technique is based on operations of breaking the text up into units, that is, discovering the different centers of meaning that constitute communication and, after that, regrouping them into classes or categories.

Results and Discussion

From analysis of the material collected, two central categories were identified, which we have designated “Comprehensiveness and academic formation” and “Stress points: philosophy, organization, and ethics”.

Comprehensiveness and academic formation
First of all, it is important to delimit the meaning of comprehensiveness that will be adopted in this study. An analysis systematized three sets of meanings regarding the term: “comprehensiveness” as a feature of good medicine, “comprehensiveness” as a way of organizing practices, and “comprehensiveness” as governmental response to specific health problems.[12]

In this study, the intention was to analyze the formative aspects and tensions in relation to complete educational formation, i.e., a feature of good medicine that is related to its more human-centered aspect, with a response to patient suffering and care so that this response is not reduced to an apparatus or biological system.[12]. The central point of reference of the DC is clinical care based on integration of the different specialties of dentistry. In the proposal of integration between DS (PIPPS) and DC, the perspective was to broaden the vision of students to other components of health care, contributing to a more human-centered understanding of health, which moves away from an exclusively biological or technical view.

The partnership between DS (PIPPS) and DC advanced integration between collective health practices and activities of the clinic. In the view of one of the professors:

I think this integration between the training received in the Family Health Program (Programa Saúde da Família - PSF) and the training received within the clinic is very important. Being able to go into the community and know the reality is only justified if one is able to transform this reality for the better. Bringing the patient to be cared for within the clinic effectively contributes to improvement for the family visited. The visit made by the student passes from extracting family data to a positive intervention when these data are known by the academic community, because knowledge is exchanged [...]. (Professor A)

The proposal of expanding attention beyond clinical care is a differential when compared to traditional proposals that focus only on traditional curative care. Some studies consider that the traditional comprehensive care clinic is limited in promoting oral health, whose main focus is on curative care on an outpatient basis.[1,4,13].

According to research undertaken, the big challenge in the proposal of undergraduate teaching in dentistry is overcoming the model of teaching following Flexner, which prioritized educational formation directed toward disease, in detriment to health.[1, 14]. In this case, the integration of DS with DC has led to an advance in comprehensiveness. As Student A reports:

[..] when he begins to have greater contact with the community, he comes to understand it better, both in its social life and psychological aspects. Some patients approach just because they want to talk with the professional (trainee); just the fact of listening to him makes him feel better. And this achieves the principle of comprehensiveness [...]. (Student A).

This partnership project between DS (PIPPS) and DC contributed to greater interaction between patient and professional due to the possibilities of household visits. One of the students interviewed considered that the teaching/service partnership and moving outside the “walls” of the school were collaborative because the link between theory and practice expands the focus beyond the traditional reductionist view:
...you don’t just stay stuck in the rut in the things you learned in school focusing more on cure-directed activity. I even see a difference from when I came into the school and now that I’m almost leaving it; if we had stayed only here in the school, we would only have a cure-oriented view. we see that this process is very important; I really feel good after I began to work and I saw their side of things. (Student A).

The connection between theory and practice was also brought up by another student, who highlighted the question of interaction of the DC with the social reality of the family:

Integration is because we are going to see the reality of the PIPPS (Dentistry and Society) in the Family Health Strategy and bring it to the DC of the School (Student B).

Unlike the traditional care of the DC, in which the student does not know the social issues of the patients, patient care in the new model comes to draw nearer to the reality of the families. There is awareness of their broader needs, which most often encourages closer contact between the family and students.

This connection generates integration, which in the future may be able to awaken interest in the family to care for themselves and control over their own health. In the view of one of the patients, the students become an encouragement for oral health care:

sometimes we keep to ourselves, inactive, and you come to give a bit of encouragement, don’t you think? (Patient C)

A study carried out in 2012 states that undergraduate courses in the area of health should direct their goals toward education of a professional qualified to act in an effective manner within the Brazilian social assistance model, aware of the needs and particular characteristics of the population. In this sense, activities in the fields of practice of DS would serve to promote coordination and integration with health services and place students within the contextual reality of the population. This question was brought up by some of those interviewed

The PIPPS (Dentistry and Society) show the dentistry student the reality outside the Centro Universitário, and that way, the students become more people focused, knowing the reality of the population. (Professor A).

a community worker told me that her mission was to take students to the neediest places in her micro-area so that they would have the opportunity to experience a reality that they thought no longer existed. (Professor A).

One of the students recognizes that:

it’s not just the families that benefit; there is interaction between scientific knowledge and people’s knowledge. (Student B.)
In these relationships, signs of greater humanization in academic formation can be seen and the possibility of more human-centered and comprehensive attention to health. These reports corroborate with the experience of the broadened Clinic of the Universidade Estadual de Maringá, which has contributed to improving the vision of comprehensive care of the user of the dental clinic, strengthening academic formation and the care provided to the community [9].

In this sense, the University shows the relevance of enhancing integration, defending the role of uniting technical-professional formation and moral formation, and combining that with a human-centered relationship, capable of expanding student knowledge and infusing students with a new social commitment [4].

Stress points: philosophical, organizational, and ethical

Although there is recognition that the proposal advances comprehensiveness and a more humanizing academic formation, some stress points were perceived in relation to this reality. According to the proposal of the DS (PIPPS), after the visits, all the families that may need treatment should be referred to the DC, but what was perceived was that a minority of the students were able to fulfill this commitment.

The selection of families by the DS (PIPPS) is not based on clinical criteria, because the families are prioritized by other issues revealed in the Arch Method of Magueruez, such as: violence, alcoholism, tobacco use, senility, etc. For example, students could identify that the most prominent problem of the community visited was alcoholism. So in the PIPPS V, projects were carried out in the households of families with this problem. And in the PIPPS VI and VII, the attempt was made to enlist social institutions/sites (schools, shelters, waiting rooms of the USF, churches) to work with alcoholism in a collective approach.

In contrast, the DC is based on patient screening and minimum requirements for training within all clinical areas. This created mismatches and made the process of integration between the DC and DS difficult because the patients from the DS (PIPPS) did not always meet the requirements of the DC. The patient profile is always mentioned by students and professors as a factor of difficulty:

[...] I think this business of placing patients in the Integrated Clinic is really complicated. So much so that in other semesters we were not able to place them all, you don’t have the profile that the students need. Sometimes the person is not able to indicate the real profile of the patient [...] (Professor C).

Another participant stated that integration is positive but understands that there is the need to continue screening to identify if the student is able to care for a patient:

[...] I think it’s good but there needs to be screening so that a certain patient doesn’t lose time in coming here and not having the right student for him to be cared for within his profile [...] (Professor E).

Professor G considers that the question of screening is a difficult issue in integration between the DS (PIPPS) and DC:
in fact, the biggest difficulty I see in this proposal of integration is the question of screening. The main issue is that the student that accompanies a family should be able to perform adequate screening of a determined patient. That way, when an opening arises with the student trainee that carried out this screening, he will know how to correctly work with the patient who has a profile that he is able to care for […] (Professor G).

Screening is a fundamental element in maintaining scientism or a scientific-reductionist teaching model. In fact, it reinforces the cure-based model with a focus on the specific disease for each moment of the course. When screening disregards the cause-effect relationship among pathologies, it becomes partial and fragmented, leaving the disease displaced from the reality experienced by the patient and from the factors that truly determine and lead to its rise [15].

That way, screening is aligned with the DC in establishing an exclusively scientific-reductionist model that leads to hegemonic teaching in dentistry, centered on the disease-cure binomial. This scenario reinforces the role of screening and of the disease as “inputs” indispensable for maintaining the most traditional form of teaching [16].

Screening the patient for referral to the DC is quite highly valued and was a stress point in relation to the proposal for integration between the DC and DS (PIPPS). Professor F considers that this view of screening is reductionist and needs to be overcome

[…] we are going to lose a little in relation to the profile, but we are gaining in other aspects and there also is a point for questioning, to what extent do we lose in relation to the profile (...) because there are other periods in which the student has the possibility of caring for two patients, so why can’t one of these two patients be from the family of which you already have a full understanding of the reality? So we are giving up training professionals qualified and committed to the principle of comprehensiveness […].

In addition to the discord between the traditional scientific-reductionist model and the integrated model, other organizational problems were also reported:

[…] in relation to professors, I think there is an enormous bureaucracy both in regard to the professors in the area of DS (PIPPS) and in regard to professors in the DC in respect to bureaucracy in reception at the DC in picking up these patients from PIPPS […] (Student A).

[…] In regard to patients, the problem was registering their age, contacting them because of change of address and telephone, many patients have health insurance and are not interested in treatment at the clinic of the school of dentistry, they changed their telephone, the community health worker does not know the family, the schedule of the patients are incompatible, and the patients do not show up on the day scheduled, contact is only by cell phone, listings in various files, of various professors, this causes difficulties in the process […] (Professor D).

Inclusion of the family from the DS (PIPPS) in the DC creates the need to organize new protocols that necessarily involve greater dialogue among academic disciplines. But there were also problems related to the social conditions of the families:
The only difficulty I noticed was that sometimes the patient wasn’t at home because he was working; and the patient couldn’t afford to pay the bus fare to come to the dental school for care in the DC. So she put her uncle in her place because he could afford to pay (Student B).

Therefore, there are several points of conflict in caring for families from the DS. Two professors consider that in the face of this problematic question there is the need for greater dialogue between these two areas and that there is difficulty in this respect.

It depends on a collectively conceived proposal, not only by one specific area, but by these two areas that need to present a proposal, I would say unified (...). I think the greatest difficulty is thinking about this proposal collectively (Professor F).

I think it’s a good proposal, I think it’s natural to find a way to provide care to these families. What I really think is that there is a lack of greater integration of the clinical area with the DS (PIPPS) so that it functions in a better way and especially in relation to screening of the patient that comes here (Professor G).

Other problems were also detected. In general, there was a lack of commitment of most students in caring for the families in the DC that were visited in the DS. This is a point of concern because the family had the expectation of clinical care, but that did not happen. The students showed that they had no more connection with the problems seen in the households and chose to care for the patients screened in the DC itself.

In addition, it was observed that many students did not even finish the clinical treatment and passed the patients on to another that did not know the reality of the patient:

what belong to them to do they did, and then sent me on to another; I haven’t been able to finish yet but I intend to; the treatment is really good (Patient A).

really good, it was really good at the beginning. It was an excellent job! They came here and I went there for screening. It was really good, I was well cared for, just that my job wasn’t finished (Patient B).

There are students that, even having participated in the activities of DS and having drawn near the reality of the patient, did not have an ethical and human-centered posture toward them. This problem can be seen in this report

He made the prosthesis, the prosthesis didn’t work! He scraped it with a knife! He scraped and scraped until it broke. I continue without the prosthesis, you see? I’m diabetic, I paid for the prosthesis, he told me that he was going to come back from vacation and that he was going to continue with my teeth (...) when he got back, he put somebody else in my place and didn’t refer me to anybody. I went there around eight times and I wasn’t able to do anything! I had to go to other dentists. I work at night, I have to sleep during the day and I had to go! He really did a bad thing to me, something that he had no right to do (Patient B).

Such testimonies show the importance of investigating the different views of the subjects involved in this universe. Even in a proposal with positive potential for comprehensiveness and for
more human-centered formation, it can be seen that these objectives were not achieved and that it is important to have continual evaluation of this process.

To achieve patient satisfaction, in addition to the quality of the professional and didactic and operational organization of the DC and the DS (PIPPS), it has become necessary to emphasize ethical formation as a core element of the educational process and the true commitment that the dental professional should have to Brazilian society [3].

The attempt to draw together two areas of Dentistry that have little dialogue must be considered an important aspect in a context of placing value on curriculum changes in dentistry courses that are directed by implementation of the DCNs through reaffirmation of the comprehensiveness of care and through commitment to the human person.

There is great potential in the proposal for integration between DS (PIPPS) and DC as an aspect that facilitates complete and human-centered educational formation of students. Nevertheless, there is the need to increase dialogue and reflection to be able to define the real objectives of the Course and to create organizational protocols that can collaborate in the success of this proposal.

**Conclusion**

This study showed that there were positive impacts on the academic formation of students of the School of Dentistry of the institution studied, as well as relevant stress points in broadening the traditionally scientific reductionist/technical view to an integrated/human-centered view, with coordination between clinical care, preventive care, and care on behalf of community health.

Students traditionally focused on technical aspects and on clinical treatments were sensitized to family questions and problems, teaching and learning, acquiring connections and motivation for change in the reality of the population. The professors of different areas that work on a daily basis in a fragmented manner began to come together in an important way on behalf of integration of educational processes in dentistry and in meeting the objectives of the DCN.

Since it is a complex and dialectic process, it was possible to observe that the proposal for integration met difficulties especially due to organizational and philosophical problems, whether they are related to the dynamics of the clinic, to screening, integration and communication of professors from different areas, or lack of commitment on the part of students.

To educate a professional that meets the profile foreseen in the DCN, with a focus on comprehensiveness and a human-centered approach, there is the need to continually seek new ways to overcome the traditional teaching model that still maintains hegemony in Brazilian dentistry education.

**References**