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ORIGINAL ARTICLE

Revisiting the Basic Cycle: Prospects by Undergraduates' Students of a Brazilian Dentistry School

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Abstract

Objective: To analyze the perception of undergraduates' students in a Dentistry School about the impact of basic disciplines on their professional development, as well the integration of this knowledge with the professional sphere. **Material and Methods:** It is a qualitative research study carried out through focus groups comprised of dentistry students close to finishing their degree. The data were analyzed by the thematic content analysis. **Results:** Four categories derived from the empirical material: "Disassociation of basic disciplines within the professional cycle", "Autonomy or transference of responsibility", "Campus-DOD distancing" and "Humanization of health care from first moments". The narratives showed the difficulties faced in order to effect, indeed, integration between the basic cycle and the curricular components of the vocational cycle. It was also evident the decontextualization of the basic cycle with the perspective of approach with professional practice. In addition, student's protagonist posture and learning how to humanize health care were identified as important factors to be debated and improved in the curriculum from the beginning of the course. **Conclusion:** The difficulties faced in order to effect an actual integration between the basic disciplines and the professional disciplines bring undesirable consequences upon undergraduate, being fundamental that the construction of new pedagogical projects means an effective integration of the contents to the curriculum design, avoiding any fragmentation between the basic and vocational cycle.

Keywords: Education, Dental; Schools, Dental; Students, Dental; Learning.

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Introduction

Dentistry curriculum in Brazil has sought changes in their structures that aim to accommodate the profile of their profession, seeking to make undergraduate the genesis of future professionals who associate technical excellence with critical thinking skills capable of driving advances and improvements in community, as recommended by the National Curricular Guidelines (NCG). In order to make the development of professionals by impacting public health a reality in Brazil, the gaps between basic cycle, social sciences and clinic must be reared [1].

However, this process of transitioning and revising a curriculum, based on the assumptions of the NCG, is slow and permeated with difficulties coherent with the complex structural change, which implies a new pedagogical culture of the educational institutions - a fact that is met with resistance among the managers, professor, students and staff, especially those who are more rooted in traditional teaching.

This context of curricular reforms includes disciplines belonging to the "basic cycle" that, in general, have remained unchanged in the curricular structure of the great majority of universities for many years. The institutional organization of the disciplines of the basic area occurs in such a way that each discipline is offered by a different Department. The organization across these Departments occurs in such a way that there is a restricted interaction between the different disciplines, and students report that because of this, the curricular discussions between professors is very restricted, being limited, almost always, to formal or administrative aspects [2].

The standardized objective of the basic cycle is to prepare the students for their later admission into the professional knowledge. Once they reach this phase, the subjects they have studied have practical applicability and come together to form the knowledge necessary for their implementation [3].

Since students are the target audience for which a curriculum is structured, their active participation in this construction becomes essential. In this sense, the students of the final stages of the course can be an invaluable source of information capable of coherently suggesting changes to the curricular structure. At this moment, the student can meet the needs of both groups involved in the process [4].

The present study had the objective of analyze the perception of the final-stage students enrolled in the dentistry course of the Federal University of Rio Grande do Norte about the impact of the basic cycle disciplines on their professional development, as well the integration of this knowledge with the professional sphere.

Material and Methods

Study Design

The qualitative research was carried out with the participation of undergraduate students of the Federal University of Rio Grande do Norte Dentistry School. They were interviewed about a number of subjects ranging from the problematization of the basic cycle of the course to the approach of specific aspects attributed to the education system.

Data Collection

The students' participation was achieved through focus groups, a data collection strategy that is given through group interviews appropriate for studies that seek to understand attitudes, preferences, needs and feelings [5,6]. In order to compose the focus groups, were selected students enrolled in the last year (8th and 9th periods) of the Federal University of Rio Grande do Norte Dentistry School, with a total of 11 participants per period.

The meetings were held in the classrooms of the Department of Dentistry, here chairs were made available in a circle, allowing visual contact between the students and the researchers, facilitating communication and the participation of all. After the accommodation of the participants the proposal was presented, followed by the individual presentation of each component of the group, including the researchers and a brief explanation of the activity that would be developed. The focus group was conducted in each period (8th and 9th periods), each with the participation of 11 students. The meetings lasted about an hour and thirty minutes.

All two focus groups were conducted using a semi-structured interview script. The script used for the development of the focus group involved several guiding questions, involved aspects of "how the student observed the experiences undergone during the basic cycle, especially related to the main contents learned that directed the development of a professional background" and "the subjects that were repeated in other phases of the course and how these principles have become student knowledge". The interview recordings were transcribed and the pre-analysis, as proposed by Bardin [7]. The corpus was analyzed with the thematic category technique [7] and consisted of: (1) was performed by means of a floating reading of the speech, allowing an initial approximation of the content addressed by the participants; (2) subsequently, the meaning units were identified through the grouping of common and unusual codes; (3) When the entire corpus was analyzed, we produced a table on which the meaning cores were defined. Finally, based on the meaning cores generated the thematic content analysis [8] was undertaken.

Ethical Aspects

The study project was approved by the Research Ethics Committee Hospital Onofre Lopes (Protocol No. 16654).

Results and Discussion

After the analysis and interpretation of empirical material, four categories have emerged: "Disarticulation of the subjects of the Basic with the professional cycle," "Autonomy or transfer of responsibility," "Campus-DOD distancing," and "Humanization of health care from first moments. Each category of analysis identified brings with it important discourses concerning the understanding of the theme, characterizing the central idea and is expressed in the following. Finally, it is important to emphasize that this study is limited in that the data is derived from the memory bias of the research subjects since they were required to remember the initial periods of the dental course when they are already finishing the same.

It was possible to obtain a critical arsenal of ideas from the students in the final stages of the Dentistry School as they identified critical points of their undergraduate course, especially with respect to the initial subjects that comprise the so-called "basic cycle".

This basic cycle should be a comprehensive orientation to the profession, designed to help students develop attitudes and skills aimed at an understanding of actual professional demands and the process of scientific reflection and communication, consisting of a key moment designed to spark students' interest in the course or an opportunity to identify or seek other alternatives in their university education [3].

Admission to the university is socially a moment of significant change in the life of an individual. This period is marked by a feeling of euphoria and expectation about one's plans regarding one's professional future. However, what has been observed in the perception of a substantial segment of the students is the idea that the initial contact with the basic subjects does not correspond to the expectation regarding the knowledge of the university and the course. Other study corroborates this finding, in which the students who composed the study reported higher learning significance in the vocational cycle [3]. This situation gave rise to the category "Disarticulation of the disciplines of the Basic with the vocational cycle," which could be identified from observations of the students, such as the following:

> *"At the beginning of the course we also see very repetitive subjects, right? So, for people who want dentistry, the course itself starts very late."*

> *"The problem is the second period! It is known in the course as a divisor mark. Passed the second period, you are able to enter Dentistry School. Before, no. You continue being a freshman!"*

The perspective put forward indicates the need to incentivize having their first experiences with the profession in the beginning coursework as a further stimulus for the students' academic qualification.

> *"Well, my complaint is this: I think that all the basic subjects, however basic they should be, should be turned to the area, because if it is not, what's the use [learning] the basics if we are not going to apply the basics? Are not you going to study the basic? But what if you do not apply that to...? Nothing is learned!"*

It is clear that most of the basic cycle subjects did not connect with the professional practice. Although the students recognize the importance of these disciplines for their training, there is a large gap between them and the professional cycle. Additionally, the composition of the course in the basic cycle is quite diverse, with professionals of several backgrounds always focused on the specific contents of the discipline.

> *"That's what I was going to say: the basic subjects today we do not remember because [they have] no relation to what we live today."*

In this context, the professor's position was pointed out as one of the probable elements responsible for this basic/vocational gap. In many of the speeches, the occurrence of pedagogical methodologies were observed to be improperly implemented, which exacerbated the acquisition of specific content, and their exhaustive repetition did little to contribute to the practice of dental professionals. An extensive package of information is lost due to the lack of applicability in the professional practice and decontextualization in relation to the health area. One student said,

> *"In the initial periods, mainly, we had to choose what we were going to study... And ended up giving a bigger direction to matters that do not have so much applicability in professional life."*

Unfortunately, the pedagogical model that becomes hegemonic is discipline with excessive information that has no practical application. The lack of an established connection between the theoretical content of some subjects of the basic cycle and the practical experience of the undergraduate student causes that content are lost in undergraduate approaches [9]. Another very significant element is that most of the professors linked to the basic cycle have a strong leaning towards the "stricto-sensu", directing their research to specific elements of the basic sciences with little relationship to the deepening of knowledge related to the main health problems of the population.

> *"But I think some* professors *are not prepared to teach. They are prepared for masters, doctorates, research... To teach by theyself, student and* professor, *I think many [professors] need to learn".*

Undoubtedly, the most adequate way of adapting the current system would guarantee a perspective to allow an interdisciplinary approach since the beginning of the course. It should be directly linked to build an integrated curriculum allowing effective articulation between the different ways of knowledge, and its application, making available in increasing complexity throughout the course [10].

The discourse of the students allowed the researchers to identify a lack of familiarity with the professional arena by a good part of the professors of the basic cycle who did not have trained in dentistry. It became quite clear that the alternative used by these professors was to assign the responsibility of learning aspects related to dentistry to supposed "seminars". As a result, the category "Autonomy or transfer of responsibility" has been identified, characterized by some speakers, such as the following:

> *"The own student was the responsible to everything related to dentistry… Always in the perspective of "seminar". What we would have to learn, we must teach."*

It is fundamental that the student's autonomy, a strategy strongly stimulated in the active learning methodologies, is not confused with transference of responsibility from the professor to the students. In a study carried out with students of Dentistry, the passivity of the students in their

learning was identified, so that the teacher is still at the center of the teaching-learning process [11]. This is a reflection of the lack of protagonism of the students who do not feel co-responsible for managing their learning, attributing only this task to the teacher [11,12]. Some students even mentioned the proposal to abolish the "seminars" in the basics due to the large number of group work and the lack of useful information taught. This is expressed in the following:

> *"Prohibit the seminar in the basic cycle"*
> *"I spent two weeks with that 'X' seminar. And I still slang. So much, that I've been explaining the content to the* professor. *So much terror they do and I've never been involved in presenting a seminar."*

The seminar, as an educational strategy, is a space in which ideas must sprout or be sown, allowing the group to discuss amazing themes or situations [13]. Therefore, what the students point to in their responses is not characterized as a seminar, but as a transmission of content by the student.

It would be highly relevant to the student's understanding of himself as an agent of his academic reality, being co-responsible for this trajectory, mediated by an active participation [13,14]. However, professor has a fundamental role in guiding this process, avoiding situations in which the student would feel pressured to have to solve problems from his own initiative rather than being guided by suitable pedagogical principles:

> *"All students tell about the deficiency of 'Y" discipline, but those who want to learn, have learned. Because so, who wanted to look, I searched, because I had the monitoring after class. The night that some students stayed, and what I really learned from 'Y" was in the monitoring, were not in class. The classes did not teach us anything. But those who wanted to stay with the monitors [learned something ..."*

In fact, the student is the agent of his learning, someone who practices the action, but not just any action, rather a learning built into his interaction with the social reality in which lives [15].

The agency of the students of dentistry is the fruit of a satisfactory relationship between them and his professor, and for this, it is important that professors have an adequate qualification so that they present information not only related to the technical-professional education, but broad pedagogical and scientific knowledge based on ethical and humanistic principles [16,17].

> *"Although he [the professor] was a psychologist, he learned what a dentist does. The best stuff we learned was his."*

Education is not a clear and simple phenomenon because it is a process inserted in a multidimensional historical context. Thus, the commitment and awareness of the agents in the teaching-learning process (professors and students) is extremely important for an education that prepares students to become aware of the world and transform it [15,18].

It is also possible to perceive a strong disaggregation between the basic and the professional cycle, not only with regard to the interdisciplinarity of the subjects taught, but also related to the physical ambience in which these curricular components are offered. The following perspective suggests the creation of the category "Campus UFRN-DOD distancing".

> *"I just came to know the things really after I arrived in the fifth period. It was there I started to know the* professors, *to know that there was a clinic and what was like that, another one that was roasted ... So, I felt more disoriented than a patient who came here".*

In Federal University of Rio Grande do Norte Dentistry School, the student goes through two distinct phases that aren't correlated very well: (1) the basic cycle, in which the student experiences the general learning experience at the university campus, together with other undergraduate courses, and (2) the professional cycle, in which all the curricular activities are developed within the scope of the Department of Dentistry (DOD) of Federal University of Rio Grande do Norte. This phase involves no contact with academics of the other courses.

The perception of students is that the "segmentation" of physical space results in feeling of frustration regarding the initial contact with the course due to the lack of knowledge about the work environment.

> *"So, I think the students, at the beginning, have a little lost; they do not know the structure itself, how it works [the DOD]"*

In terms of the supply process of the disciplines, this physical distance makes correlation between the teaching staff infeasible, resulting that professors of the basic cycle have practically no contact with the other professors. This has been expressed in the following:

> *"I was here at the* professors *meeting and the single professor of basic was the one from the discipline "Z" came. Professors of the basics do not even come here."*

This can result in a large gap in the multidisciplinary logic, implying that the subjects that are taught at the university campus are lost and/or disconnected when the student arrives at the Department of Dentistry. Professors from both environments do not correlate the disciplines between themselves, failing to optimize learning, a fact that results in failures in the professional academic training. This problem is verified in the following quotation:

> *"The basic questions were general; they were not associated with dentistry, so we may not remember many things."*

Although it is undeniable that the diversity of specific physical spaces for each course will bring benefits, another problem that comes to the forefront is related to the lack of integration between the students of dentistry and the other students of the university, which will be part of a body of theoretically integrated work. There are some reports related to multiprofessional activities

and the lack of interaction of the student of Dentistry with other services and courses [19, 20]. These authors emphasize the importance of diversifying the practice scenarios, including extramural activities in order to provide undergraduate students in dentistry with the experience of working in a multi-professional team.

Thus, the students of the Dentistry School from the fourth period make up a cadre of academics who have little contact with the students of other courses, making these future dentists deficient in their knowledge about the teamwork practiced with other professionals.

> *"And this vision is very accurate; we do not know how to deal with the context of SUS itself, about the structure. We do not know how to organize as a team. We do not know if we organize them correctly."*

Studies affirm that the absence of interdisciplinarity and contact with health professionals, in most cases, starts from the time of graduation due to the confinement of each course within itself, making it impossible for multi-professional interaction to occur due to the lack of a common physical space that stimulates and fosters social interaction among academics, which has been demonstrated to be essential for the effectiveness of the exchange of ideas [19-21]. The presence of students in the health services has been determinant for the advancement of interdisciplinarity. For this, authors suggest that the teaching-service-community integration has contributed to the team work, the strengthening of autonomy, communication and decision making of the student, enabling him to understand the forms of organization and management of health work [21].

When this is not observed in health education institutions, it causes the so-called "alienation" in the teaching-learning process, which is reflected in a defective system in the future professional of the students, especially with regard to teamwork in the units due to the lack of knowledge of the role and work of other professionals [22].

Thus, although the diversity of spaces is beneficial in some respects, it is extremely necessary to connect these settings in order to convert the current situation of isolated, fragmented spaces that do little to capture the socialization process with the capacity for learning [23-25] being, therefore, a process of sequential and correlated logic in the construction of the professional profile. To meet this need, higher education in the area of health has developed extra-mural activities as an integral part of its pedagogical projects. Some studies point to some successful experiences generating optimistic perspectives of innovation and achievement regarding the integration of knowledge and, in general, demonstrate experiences that favor professional training for work in public health services [24].

In addition, the approach to the humanization of health care was one of the most salient points boarded by the students. According to the analysis, the students have identified the necessity of having a bond with the patient and are concerned with respect their individual/personal conditions, thus allowing for a better understanding of the individual care [26]. This perspective, in the view of the students, should be worked out from the initial semesters of the course, considering that this is one of the main competences that a healthcare professional should exhibit.

> *"You need to know that you cannot be a rough, rude person because that patient isn't going to like you. And other things too, to know that you need to take responsibility for that, not only because you owe the professor but because you owe the patient, which is a life."*

However, the data shows a remarkable disconnect regarding the exercise of this humanistic practice taught throughout the disciplines of the social sciences in the basic cycle of the course. This suggests that this content is forgotten or not applied at the moment in which the academic enters the professional cycle, thus revealing a strong disaggregation between these two stages of dental education, which resulted in the category "Humanization of care from the beginning".

> *"It has no humanization. There is no humanization from the moment I arrived to the patient to ask something and inform: you go to the clinic such. The people that are in the halls, the people who go there and say: oh, it's here, it's like this ... the professors themselves are not connected to these patients."*

Therefore, this invites an opportunity to consider the expansion of the role of the teaching staff in the learning of and in the formation of a caring, professional manner in the undergraduate student, making it clear that, depending on the methodology recommended by the professor in a particular discipline, the student is only prepared for the private labor market [11,25] where the number of procedures performed becomes more important than the quality of the service.

> *"Sometimes it is not worth leaving the house to make a restoration and not worth anything."*

This refers to the Flexnerian model, which is focused on the achievement of goals and techniques, in which the neglect of humanistic practices sometimes occurs [26,27] and which is consistent with the teaching of several Dentistry Schools.

Health care should also be given to the fact that, among other issues, it is through the satisfaction of the individuals assisted that a parameter is established regarding the quality of the health services offered, which also serves as a means for evaluating the possibilities of improvements to the systems available [17,27], as exemplified in what concerns the formative character of the dentist or in relation to the questions regarding the method of teaching still employed, among other questions that elicit plausible changes within the system.

This approach provoked a strong discussion among these students on the cusp of undergraduate, realizing that the very resistance to accepting a model that privileges the procedure to the detriment of a patient's global health should be approached insistently at the beginning of the course in order to allow for mature and consistent questioning of professors who adopt this measure as an alternative evaluation.

Conclusion

It was observed that the difficulties faced in order to effect an actual integration between the basic disciplines and the professional disciplines bring undesirable consequences upon

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undergraduate. Additionally, the agency of the student and the humanization of care are important factors to be debated and improved in the curricular structure, throughout the course. It is fundamental that the construction of new pedagogical projects bring an effective integration of the contents to the curriculum design, avoiding any fragmentation between the basic and vocational cycle, calling on different Departments and professors to understand the imperative nature of this change.

Educators should take advantage about the moment of entry of the student, in which he is open to new attitudes and skills like ethics, social responsibility, and caring for the human being are emphasized in reference to becoming active health professionals over the course of the student's educational process.

The pedagogical point of view highlighted the need to invest in training professors in active learning methodologies, allowing for the adoption of strategies that contribute to the student's autonomy, including professors becoming mentors in order to assist students in developing within the scope of their education and profession.

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