THE PEDAGOGICAL TRAINING FOR NUTRITION PROFESSORS FROM TWO HIGHER EDUCATION INSTITUTIONS IN GOIÂNIA

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ABSTRACT: To describe how the nutritionist faculty training process is organized in undergraduate programs in Nutrition. A descriptive qualitative quantitative study, conducted with nutritionist faculty at two universities. Were used: a questionnaire and a semi-structured interview. Most of those surveyed trained as teachers through live experience, and most did not have initial didactic-pedagogical training. The obstacles mentioned were related to the absence of such training, having repercussions on how to deal with students and with the respondents' own internal difficulties. Those working in the Public Institution of Higher Education have an exclusive commitment, more qualifications, are more involved in activities related to education, and recognize that prior didactic-pedagogical training would facilitate the educator's practice.

Keywords: Higher Education. Nutrition. Initial training. Teaching practices.

A FORMAÇÃO PEDAGÓGICA PARA PROFESSORES DE NUTRIÇÃO DE DUAS INSTITUIÇÕES DE ENSINO SUPERIOR EM GOIÂNIA, GO

RESUMO: Este texto descreve como se organiza o processo de formação dos professores especialistas em Nutrição em Programas de Pós-graduação em Nutrição. Em um estudo quanti-qualitativo e por meio de um questionário e de uma entrevista semiestruturada, realizados com docentes dessa área e atuantes em duas universidades, identificou-se que a maioria dos professores entrevistados não tem formação didático-pedagógica inicial e se capacitaram na vivência da própria profissão. Os limites apontados estavam relacionados à ausência desse tipo de formação que tem implicações no modo de lidar com os alunos e com as próprias dificuldades internas dos entrevistados. Aqueles que trabalham em Instituição Pública de Ensino Superior têm um compromisso exclusivo com o curso, mais títulos, estão mais envolvidos nas atividades relacionadas com a educação e reconhecem que o ensino e a formação didático-pedagógica prévia facilitaria a prática docente.

Introduction

In the government decree that created the first nutrition studies program in Brazil, in 1939, it was already established that nutrition students should be trained to provide nutrition courses in public or private elementary schools (Gil, 1986; Associação Brasileira de Nutrição, 1991).

Only twenty years after the creation of the first program, was the inclusion of a course on “Applied Pedagogy in Nutrition” stipulated in the minimum curriculum within the professional course (Calado, 2003; Vasconcelos e Calado, 2011).

In 1991, the profession received new regulations adding, as private activities of nutritionists, the teaching of courses on nutrition and food, in undergraduate study programs in health and related areas (Associação Brasileira de Nutrição, 1991).

With the publication of the Guidelines (Resolution number 5/2001), the minimum curriculum ceases to exist. One now considers the development of academic and professional profiles with skills, abilities, and content consistent with a contemporary approach to training and with defined principles that should govern the nutritionist’s practice (Brasil, 2001; Soares, 2010).

Despite these changes, throughout its history there is still a clear mismatch between the curricular changes and the professional training for nutritionists, especially those related to their teaching practice (Barreto, 1991).

The aim of this study was to understand how to establish the process of teacher training for nutritionists who work as professors in undergraduate Nutrition Studies programs.

Method

We conducted a descriptive qualitative quantitative study with nutritionists who had graduated at least eight years prior, were carrying out teaching activities, and were active in undergraduate Nutrition Studies programs, at two universities, one public and secular, and another with a community and religious affiliation.

Data collection took place between November 2011 and February 2012, in two phases, and using two instruments: a questionnaire consisting of sixteen questions and a semi-structured interview conducted afterward.

The questionnaire characterized participants in relation to the institution, place, and year of graduation, specialization degree, current professional activities, initial teacher training, teaching time, entry into academic life, family influences, difficulties encountered, participation in courses of study, methodology used, and type of assessment. The first eleven questions were analyzed with descriptive statistics and the data presented in absolute numbers and percentages. The association between variables was analyzed with the chi-square test at a 5% significance level. The remaining questions were classified, categorized, and organized according to content analysis (Minayo, 1992; Oliveira et al., 2003).

The identity of the nutritionist teachers was kept secret, and thus we used a system for coding (NPR - Nutritionist Professor, Religious institution, and NPF - Nutritionist Professor, Federal institution) and for a subsequent identification number according to the order the completed questionnaires were received.

After receiving the questionnaires, we began the second phase of the study. At this stage, we interviewed all the teachers who responded to the questionnaire. The interviews were used to gather information about what it is to be a teacher in the health area, characteristics of a good teacher, how does one learn to be a teacher, influencing factors, qualifications as preparation for the practice of teaching, reflective practices in pedagogical work, and the integration of the course with the rest of the curriculum.

The interviews were recorded electronically, transcribed, and categorized according to Bardin’s content analysis units.
The answers from part of the questionnaire and from the interview were given a descriptive-analytical reading (Minayo, 1992; Oliveira et al., 2003).

The research project was approved by the Research Ethics Committee of the “Hospital das Clínicas”, Federal University of Goiás, designation number 142/2011.

Results

Here is the flow chart of the participation and characteristics of the sample of nutritionist teachers (Figure 1).

**Figure 1** – Distribution of nutritionist teachers who participated in the survey. Goiania, GO, Brazil, 2012.

Table 1 shows the responses collected by the questionnaire and describes the participants with regard to teacher training.

**Table 1** - Distribution of nutritionist teachers of each Institution of Higher Education (IHE). Goiânia, GO, Brazil, 2012.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Analysis (p&lt;0.05)</th>
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<tbody>
<tr>
<td>Bachelor's Degree</td>
<td>60% Federal University of Goiás</td>
</tr>
<tr>
<td>Post-Graduate</td>
<td>Public IHE</td>
</tr>
<tr>
<td></td>
<td>100% Sensu Stricto</td>
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<tr>
<td></td>
<td>92.9% Doctoral</td>
</tr>
<tr>
<td>Religious IHE</td>
<td>71.4% Doctoral</td>
</tr>
<tr>
<td></td>
<td>21.4% Specialized</td>
</tr>
<tr>
<td>Time since Graduation</td>
<td>Public IHE 20.7 years (±8.8)</td>
</tr>
<tr>
<td></td>
<td>Religious IHE 14.2 years (±7.0)</td>
</tr>
<tr>
<td>Professional activities</td>
<td>Public IHE 92.9% exclusive dedication</td>
</tr>
<tr>
<td></td>
<td>Religious IHE 64.3% double bond</td>
</tr>
</tbody>
</table>

Table prepared by the author from the questionnaire
Table 2 shows the characterization of individuals by examining the Lattes curriculum (CV) according to institutional connection.

**Table 2** - Characterization of teaching nutritionists from each Institution of Higher Education, via analysis of the Lattes curriculum (CV). Goiânia, GO, Brazil, 2012

<table>
<thead>
<tr>
<th>Variables</th>
<th>Analysis</th>
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<tbody>
<tr>
<td>Participation in research projects</td>
<td>Public IHE 77.8%</td>
</tr>
<tr>
<td></td>
<td>Religious IHE 28.65%</td>
</tr>
<tr>
<td></td>
<td><em>(p&lt;0.05)</em></td>
</tr>
<tr>
<td>Academic Production</td>
<td>Public IHE 100% last 5 years</td>
</tr>
<tr>
<td></td>
<td>Religious IHE 30%</td>
</tr>
<tr>
<td></td>
<td><em>(p&lt;0.05)</em></td>
</tr>
<tr>
<td>Participation in events</td>
<td>Similar for public and religious IHEs</td>
</tr>
<tr>
<td></td>
<td><em>(p&lt;0.05)</em></td>
</tr>
<tr>
<td>Pedagogical training</td>
<td>29% some pedagogical training after graduation</td>
</tr>
<tr>
<td></td>
<td>Table prepared by the author after analysis of the curriculum lattes</td>
</tr>
</tbody>
</table>

The interviewees considered more important, for taking on teaching activities, the mastery of the technical knowledge according to their area of expertise: “during the Specialized Program on Institutional Food, I attended the courses: Teaching and Methodology of Higher Education (NPF_03)”.

Regarding the frequency with which they participate in courses in the pedagogical area, the individuals surveyed reported attending this type of activity, eventually, when they have time and financial conditions for this, or do so when their institution provides some type of course. “During these four years, I attended one continuing education course, proposed by the University itself (NPR_13)”.

Entry into the teaching profession in the religious IHE was arranged for some by invitation (29%), handled by the administrators of the institution (visiting professor). This group continued in teaching positions via acceptance as a substitute teacher, and some competed for full professor positions. In the public IHE, entry always occurred through a public competition for a substitute or a full professor position. The teachers reported having experienced little family influence to follow this career, even when the parents or relatives were teachers.

The results from the responses to the second part of the questionnaire were analyzed and grouped into:

**Category 1: Educational obstacles**

a) Professor: the lack of teacher training was the difficulty most often cited by nutritionists. How to be a teacher without having received any specific training for this practice? “As there was no undergraduate course in the pedagogy area, or even other academic experiences that would promote work in this area, I had a rather hard time performing as a teacher. In the face of great difficulty in proposing dynamic methodologies of teaching and learning, I was limited to the traditional model, i.e., lecture classes (NPF_01)”.

b) Student: the level of students' knowledge, the immaturity, behavior, classroom interest, and the
relationship with the student are factors that hinder the teaching.

“Being a practical course (internship) the greatest difficulty in the beginning was the relationship with the students and how to make them understand that I am the teacher and not their classmate (NPR_04)”.

c) Internal factors: it was evident that the fragility, insecurity, immaturity, inexperience, lack of knowledge, lack of reflection on teaching practice, and fear are factors that hinder teaching practice.

“In the beginning I was quite afraid and insecure about entering the classroom, since I had not mastered pedagogical techniques, in addition to feeling intimidated by the class (NPR_11)”.

Category 2: Plan execution practices and learning assessment

a) Methodological Procedures: asked about how to carry out a teaching plan, the discourse was that the majority use active methodologies whenever possible, making use of questioning, problem-based learning, and seminars with discussion groups, or they intersperse, with some limited frequency, the traditional methodology of lecture classes. “I try to vary, because the students do not have much interest in the discipline that I teach. I try to vary to keep them stimulated (NPR_16)”.

“In practice it is based on a dialogued lecture, but starting in 2011 I will be discussing some content [...] through active methodologies (NPF_10)”.

b) Assessment Procedures: subjective and objective assessments comprise the bulk of the teaching practice of these nutritionists, in addition to evaluating their students by observing classroom performance, by attendance, punctuality, interest, tests, seminars, and reports.

“It depends on the course and the content, but there are evaluation strategies that can be adopted: a traditional test (discursive and / or objective), portfolio, technical accounts (would be like reports), field diary, classroom participation, seminars, activity plans (NPF_14)”.

Category 3: Facilitating Agents

Interlocutors suggest that better pay, integration of disciplines, exclusive dedication to teaching, teaching, technical, and human resources were considered as possible facilitating agents for teaching. Also in this item, teacher training was again cited, but needing to be of an officially recognized form.

“Prior approved didactic and pedagogical training, or more courses that address the pedagogical dimension, especially during the teaching internship, in masters and doctoral degree programs; institutional policies to support teacher pedagogical training. This does not include pedagogical skills building, that occurs randomly in some institutions of higher education (NPR_06)”. “I think that discovering new ways - teaching-learning techniques, continuing education [...] keeping current with the pedagogical area, since we have no training (NPF_08)”.

The interviews helped to uncover other aspects. The categorial tree of semi-structured interviews was composed as follows:

Category 1: Teaching practice

a) Holistic Vision: the narratives demonstrated that there is concern in passing the knowledge, but this also goes beyond the theoretical / technical issues, in seeking to form complete professionals who will know how to deal with people's needs and requirements; they are concerned with teaching the true meaning of professional learning.

The good teacher is understood by the participants as an educator mindful of the complex personality of the student, and of the needs of the population that will use that healthcare professional's service.

In addition, they characterize their
pedagogical practice, the teaching being in the health area, by the possibility of training the student in the perspective of the concepts of education and health. So he must have these well-structured and well-reasoned concepts.

“Being a teacher, [...] is very important, [...] you cannot train only a technical student, you cannot pass only the technical information. You have to train a student who necessarily has the technical part, but you have to train in this student the ethical part, the human part (NPF_07)”.

b) Skills: When asked about what it is to be a good teacher, how you learn to be a teacher, and what influences this career, the nutritionists covered topics such as: you have to like, love, be able, to have the gift, have wisdom, know how to deal with educational practice, have technical expertise, which can be developed via courses, specializations, and by enhancing academic qualifications.

Most relate that the skills for teaching are developed in daily life, change every day, varying according to the context, type of student, methodology employed. They also include the need for an ethical posture of knowing how to listen, respect the students, live with differences, be fair in reviews, and be honest.

“To be a good teacher, you have to be didactic, have a knowledge of educational theories, you need to have a good relationship with your students. Why does no one there know more than the other. A teacher knows as much as the student, perhaps has more life experience, perhaps is older, but the guidance given to students must be worked out as an exchange, an exchange of experiences, and not that one thing that I know more and the student knows less. So, that vertical transmission theory is out. It is a challenge. You separate the friendship with the student, pursue the pedagogical and hierarchical relationship. [...] For you to be a good teacher you have to like what you do (NPR_11)”.

“Natural ability is [...] a quality either developed or acquired (laughs) genetically, so to speak. And that you more easily have toward being able to act in that area (NPF_13)” “To be a teacher you have to have a natural gift. The teacher, above all else, has to have a love for the profession to be able to pass it on, and he/she has to have the gift of communication, to speak well, a certain posture (NPR_02)”.

c) Reflective practice: Few teachers reported having the habit of reflective practice. Some even asked the researcher what reflective practice was, and others gave new meanings to this practice.

“I try to encourage students toward critical thinking. [...] I work a lot with conversation circles [...] (NPR_01)” “For each day that passes I do self-evaluation [...]. For each semester I complete [...] where I will reinitiate a course, I plan it all again and with innovations. So much so that students who fail at times, they enter into a new methodology of the discipline. [...] They say: wow professor, I am learning a lot more this semester than last semester [...] (NPR_08)” “To be honest, I did not understand this question on reflective practice very well [...] (NPR_09)”.
d) Integration: only a few teachers reported that there is integration between the discipline they teach and others in the curriculum; while others did not know, did not respond, or affirmed there is no integration between the disciplines.

For some teachers, there is integration because their discipline "involves knowledge of other specialties", "the contents are complementary", because there are "foundations coming from other basic subjects, or prerequisites"

"It's like I'm from public health area, we teachers construct all the disciplines together. And some content, it is actually given continuity in certain disciplines. [...] But we try to integrate, in the classroom as well as in the practical settings (NPF_01)"

Discussion

Rethinking teaching practice at the undergraduate level is rethinking the university, teacher training as well as the academic training institutions (Loureiro, 2001).

In this work, the data obtained corroborate those found in another study regarding the majority of respondents being female and having completed undergraduate studies more than five years ago (Rozendo et al., 1999).

With reference to the dedication to teaching and the double bond presented by teachers from the religious institution, it was found that while public institutions provide balance and opportunities for continuing qualification, in the private setting there is a low level of stability for the activities of its teachers (Rowe e Bastos, 2010).

Low participation was observed in research projects and academic production by the professors of the religious IHE, that is, the connection with the teaching profession significantly influences their academic production and it is clear that when the research activities fall within the daily teaching routine, their activities are more focused on research and they publish more in periodicals (Rowe e Bastos, 2010). This can be explained by the belittling of teaching activity at universities in general (Costa, 2009).

In contrast to the study participants' statements above, entry into the teaching profession (Rodrigues e Mendes Sobrinho, 2008; Pimenta e Anastasiou, 2002) occurs as a natural result of professional activities and even for diverse reasons.

The narratives reported in this study reveal the controversy that persists between the law that regulates the profession of nutritionist (Brasil, 1991), the National Curriculum Guidelines (NCGs) (Brasil, 2001), and the professional who has completed academic training. The law is clear about the nutritionist's prerogative to take on the activities of direction, supervision, and conduct of unique courses in nutrition degree programs. However, the educational institutions have placed value on technical and technological training at the expense of pedagogical training, since there is no provision for this modality in nutrition degree programs and the NCGs maintain them as optional.

Although the Guidelines and Basics Law indicates the need for at least one third of the teachers at institutions of higher education to hold a master's or doctoral academic degree, this is not a reality at all institutions. Even at those where the requirement is met, this fact does not influence the other teachers in the pursuit of qualification. As seen in the study, a portion of the religious institution's teachers have a master's degree, thus meeting the stipulation of the law.

The master's and doctoral degrees do not guarantee that the teacher has, throughout his/her academic training, been developing content and techniques, which have trained them for the teaching activity, even considering the possibility of offering teaching courses in the graduate-level programs (Rodrigues e Conterno, 2009).

The lack of demand for didactic-pedagogical training for admission to a university teaching position occurs because, currently, it is still seen as essential, for the
teacher take on the classroom, the scientific knowledge, to the detriment of knowledge of the teaching-learning process (Cavalcante et al., 2011). There is no pedagogical training for university teachers, which contributes to this discrepancy in mastering the field of education (Ceccim e Feuerwerker, 2004).

This training should be adopted by higher education institutions as a priority with their teachers; in addition to establishing courses with this objective in the undergraduate programs in health, and especially in nutrition, since there is support via the Law and via the degree program Curriculum Guidelines (Costa, 2010).

Pedagogical knowledge cannot be based only on the practice of each professor as seen in the sample; but must be improved in the relation he/she develops between theory and practice and this construction, as seen, does not obviate the need for pedagogical training (Guarnieri, 2005).

It was evident that the teachers surveyed have not mastered the educational and pedagogical area, neither from a philosophical nor a technical point of view (Rodrigues e Conterno, 2009). They make adequate use of what is defined as practical education, but lack in what is considered pedagogical, which is regarded as science (Pimenta e Anastasiou, 2002).

This leads to the research findings regarding obstacles to teaching, which could be nonexistent if there were prior training. Thus the importance and need for greater investment in teacher training is clear.

Such training will mean that the teacher knows how to handle a cultural variety that previously did not exist in the post-secondary institution, thus contradictorily overcoming, "the didactic obstacle", represented by the student, as reported by those surveyed.

The admission of an increasingly heterogeneous group of individuals. A population that has the possibility of stepping into higher education without being well prepared, either emotionally or intellectually, a public perhaps closer to adolescence, more immature, and, somehow, with low motivation and effort toward their learning. There are, on the other hand, individuals much more demanding as to the quality of the academic program being offered, focusing mainly on the high level of competition in the labor market (Rodrigues e Mendes Sobrinho, 2008).

Due to the lack of preparation experienced by the individuals surveyed here, this study and various authors have identified the lecture class as the most traditional of the teaching-learning strategies and the most commonly used by teachers since they a follow a solitary path through the teaching experience (Rozendo, 1999). It's easier to recreate, what has somehow already been witnessed by them.

Lecture classes should indeed be a part of the teaching methodologies, but should be used as tools, ways to mediate the more homogeneous teacher-student relationship, and together with other methodologies depending on the type of content that will be covered in the classroom (Rozendo, 1999).

Lack of preparation and the current educational model generate the use of traditional assessment with the purely quantitative analysis of the student through grades and attendance, in pursuit of an exact definition of what the student knows and does not know. There is no room for the development of the ability to create, innovate, and think critically (Rozendo, 1999).

As was demonstrated in this study, to carry out teaching, it is not enough to simply have the expertise to assume the role. It is necessary that teachers develop a familiarity directly related to teaching, such as the educational-learning domain, and engage in it. As a result, the study highlights the need to develop reflective practice and that such training takes place in academic programs in the health area with more hours of study and greater importance (Costa, 2010).

Reflective practice means learning about
what has already been covered in the classroom, thus requiring a severe reflection on its practice (Cavalcante et al., 2011). However, teachers are unprepared for reflective practice, and so the need to guide, encourage, and cooperate in the development of this action (Costa, 2009).

Another important aspect demonstrated in the study is that teachers develop a holistic view, a characteristic indispensable for the teacher. He/she must know how to deal with the teaching-learning methodology; be the creator and manager of the curriculum; have an understanding of the teacher-student and student-student analogy in the process; be the source of the basic theory and practice of educational technique; and know what kind of student he/she intends to form (Rodrigues e Conterno, 2009).

The teacher should have a holistic view since he/she is the one responsible for the student training process. It is he/she who will provide the student with an approach to true reality and what the student learns about it, working in the daily routine of the health area (Cavalcante et al., 2011).

On the other hand, being a teacher requires a solid theoretical-practical training, because the quality of the work of teaching is not the result of a natural gift, something that exists a priori, but rather, only a result of practical experience (Rodrigues e Conterno, 2009).

Unpreparedness influences various aspects of teaching, especially with regard to technical understanding. Note that the integration of which some teachers speak does not express the desired integration of the educational process, which should be the one focused on strengthening and sustaining education (Backes, Moya e Prado, 2011).

Integration should be used to generate changes in the training of health professionals and to suggest a broad understanding of health, connecting multidisciplinary and interdisciplinary knowledge and practices, innovating health care activities (Ceccim e Feuerwerker, 2004).

So it is hoped that teachers develop the dialogic and transformative practice, and not only actions of a multi- or interdisciplinary nature. It is necessary to understand the theoretical and practical involvement of objective reality, which is developed by specific individuals based on their daily experiences (Rozendo et al., 1999).

Conclusion
Through this study it was possible to understand that the pedagogical training of nutritionist teachers does not take place until they begin their practice, upon their entry into the institution of higher education. These professionals understand that the specific technical knowledge of the area, the holistic view, and command of some skills are sufficient, to some extent, to complete the didactic-pedagogical training. Due to the lack of preparation, they develop their practice and become "trained teachers" based on day-to-day practices, with lessons of learning by doing, while they demonstrate little participation and interest in a substantive pedagogical education.

As a small differential, public institutions have teachers more involved in teaching, research, greater dedication, and with greater concern for the educational aspects.

Several facilitating factors are recognized: prior formally recognized didactic training and improved working hours, remuneration, and technical resources for better addressing the obstacles that arise in academic life.

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