

## CASE REPORT

## OPEN ACCESS

### EXPERIENCE REPORT OF UNIVERSITY EXTENSION IN HEALTH: PROJECT "ANATOMIZING" THE HUMAN BODY IN THE PROCESS OF FORMATION IN ELEMENTAR EDUCATION

**\*<sup>1</sup>Amanda Sebastiana Lima Correia, <sup>1</sup>Lívia Dos Santos Lopes Assis, <sup>1</sup>Emanuella Santos Ferreira, <sup>1</sup>Matheus Halex Ferreira de Matos, <sup>1</sup>Antônio Eduardo Osório Cavalcante, <sup>1</sup>Emanuel Thomaz de Aquino Oliveira, <sup>1</sup>Luisa Chrisdayla Macêdo Santos, <sup>2</sup>Cynara Cristhina Aragão Pereira and <sup>3</sup>Jailson Alberto Rodrigues**

<sup>1</sup>Student from the Bachelor Degrees in Nursing from the Federal University of Piauí – UFPI, Campus Amílcar Ferreira Sobral– CAFS, Brazil

<sup>2</sup>Veterinarian, PhD in Animal Science, Assistant Professor I of the Bachelor of Nursing course at CAFS/UFPI

<sup>3</sup>PhD in Decision Models and Health by the Federal University of Paraíba, Assistant Professor I of the Bachelor of Nursing course at CAFS / UFPI, Brazil

#### ARTICLE INFO

##### Article History:

Received 22<sup>nd</sup> May, 2019  
Received in revised form  
19<sup>th</sup> June, 2019  
Accepted 19<sup>th</sup> July, 2019  
Published online 28<sup>th</sup> August, 2019

##### Key Words:

Anatomy; Education;  
Adolescents, extension.

#### ABSTRACT

Teaching, research and extension are pillars of Brazilian universities. The 'Anatomizing' project brought experiences to students from the Bachelor Degrees in Nursing from the Federal University of Piauí, in the city Floriano, state of Piauí, about the exchange of knowledge with elementary school students of a private school, through workshops for the construction and sharing of understands. Through the application of questionnaires it was possible to identify learning disabilities. The project made possible the realization of the workshops on some morphofunctional systems of the human body, with the demonstration of anatomical pieces in macro molds. This experience evidenced for both academics as students and teachers of elementary school that knowing the human body is important, especially from childhood to adulthood, since the processes that occur in these phases directly influence their lives. Therefore, the lack of knowledge is associated with vulnerabilizing factors in health.

Copyright © 2019, Amanda Sebastiana Lima Correia et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

**Citation:** Amanda Sebastiana Lima Correia, Lívia Dos Santos Lopes Assis, Emanuella Santos Ferreira et al. 2019. "Experience report of university extension in health: project "anatomizing" the human body in the process of formation in elementar education" *International Journal of Development Research*, 09, (08), 28974-28977.

## INTRODUCTION

According to Filho et al. (2016) the use of learning techniques goes beyond textbooks, and is also permeated by practical classes. However, teaching methodologies have undergone few changes over the years, despite the social changes and technological innovations that have occurred in the last decades (NICÁCIO, 2017). School teaching practices such as laboratory classes, theoretical discussions in classrooms, and use of other resources as synthetic anatomical pieces are used as a form of learning fixation and anatomical content (JUNQUEIRA, 2016). Teaching, research and extension are the pillars of Brazilian universities. Serving as the means of

bringing academic knowledge to external society, thus providing scientifically based knowledge to the community (CERRI, 2015). In this context, the integration of extension actions can contribute to the stimulation of students about the importance of knowledge of the structures and functions of the human body (JUNQUEIRA, 2016). The extension project 'Anatomizing' the human body in the process of formation in elementary education, counts on the cooperation of undergraduate students in Nursing, aims to intervene in the practice of school reality for health praxis and to expand the studies concerning to the human body within the elementary education with classes and workshops. Thus, it is possible to bring the anatomy of higher education to complement the studies of the human body in schools of public and private network of the municipality of Floriano, interior of the State of Piauí (PI), Brazil. The project brought this challenge to the

\*Corresponding author: Amanda Sebastiana Lima Correia

Student from the Bachelor Degrees in Nursing from the Federal University of Piauí – UFPI, Campus Amílcar Ferreira Sobral– CAFS, Brazil

students of the first semester of the course. The participants had as their mission to bring the knowledge acquired in the discipline of human anatomy to elementary school students in public and private schools, with the objective of assisting in the integration of these students to the university reality, especially in the health area. It also aimed to contribute to the construction of a future professional identity of the student still in the initial grades. To verify the approach of subjects related to the human anatomy, completing the contents applied in the discipline, using interactive classes using mockups and play activities, demonstrating associated structures of organs, functions and pathophysiology. Faced with this enriching experience for students of different levels of elementary and higher education in Brazil, the present text seeks to relate the experiences obtained in the 'anatomizing' extension project. Especially, the developed in a private school in Floriano - PI, during the second half of the year 2018.

## MATERIALS AND METHODS

The project was implemented between August and December 2018, following ethical guiding principles in work involving human subjects presented in Resolution No. 466 (BRASIL, 2012) of the National Commission for Research Ethics of the National Health Councils (CONEP/CNS) in its aspects of beneficence, not maleficence and autonomy of the subjects.

The project involved 26 elementary students, both boys and girls with ages ranging from 9 to 10 years old, who attended the fifth year of elementary education in a private school of the city of Floriano - PI. The student's participation was consensual, manifested through the assent term and authorized by their parents through the free and informed consent term, in addition to being authorized the development of the project by its administrative and pedagogical management. Questionnaires with ten subjective questions were applied in order to obtain a leveling of students' knowledge about human anatomy. With a view to evaluation and dimensioning of knowledge, difficulties and learning needs. Obtaining the answers also aimed to define the subjects to be addressed in the knowledge workshops, *a posteriori*, and the activities that the students would develop over the period. The subjects chosen to be addressed during the workshops would deal with the skeletal, muscular and reproductive systems, as male as female. As a bibliographical reference for the workshops, the pre-established programs in the discipline of the human anatomy of the Nursing course were used. During the process of construction and implementation of the workshops, the school unit designated responsible teacher, who followed the whole process. For the ludic demonstration, macro molds of the muscular and reproductive systems and realistic anatomical pieces were used, in addition to the use of the multimedia projector. After explaining the content, a dynamic was established to fix the knowledge and evaluate the success of the activity developed. The dynamics were given by the use of two plaques, each containing the words true or false, where the students asked questions related to the class, while the students raised the plates according to their answers.

## RESULTS

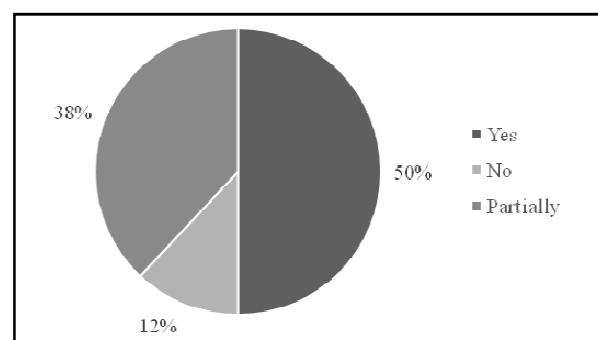
In terms of the structure of the school, it had air-conditioned and ventilated classrooms, with adequate structure for students and teachers, besides providing social inclusion, welcoming students with limitations, be they physical or cognitive. However, in addition to this benefit, the institution did not

have laboratories for the study of the natural sciences, like the study of anatomy. The proposal of university extension was found as a means of alleviating this deficiency in the school structure. Since the study with macro molds allowed students to observe body structures in a more realistic perspective, since the use of multimedia projectors and images in textbooks did not allow them to visualize them in three-dimensional form. The fifth-grade teacher was prepared and humanized, helping the team interact with the children in full, encouraging them to participate in the lesson in order to explore the theme that was being addressed during the presentation. She was responsible for establishing an important link for the communication of his students with the project participants. She also set out his curiosities for greater interaction with the class. In addition, the educator enabled and gave full opening so that the content was well absorbed. The elementary school students demonstrated mastery in the feedback of the questions asked. However, many did not know how to answer or miss questions like 'do you know why you study the human body divided into systems?' or, 'Do you know why the human body is divided into systems?' From this, it was verified the importance of clarifying simple questions that go unnoticed in the classroom. The group of students who participating in the activities developed in the project comprised eleven (11) female and fifteen (15) male children. Among them, all of them answered the questionnaires in full. The questions elaborated were discursive, although the discourse of the students was configured in summary sentences, which facilitated the thematic division of the answers addressed. On the other hand, the use of this method made it difficult to answer the questions, since it took time and generated some difficulty in the elaboration of the answers. From the application of the questionnaires, in order to evaluate their previous knowledge about the human body, 23% of the students were able to recognize their division into systems. However, 77% did not understand the reason for this, as elucidated in Table 1.

**Table 1. Distribution of the elementary students participating in the 'anatomizing' project, who answered why the human body is divided into systems**

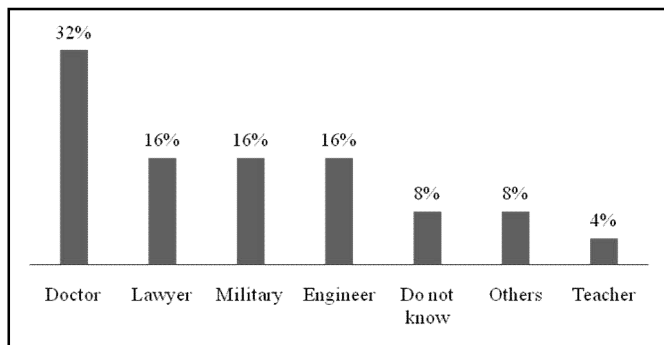
Response pattern	N	%
Answered correctly	6	23,0
Answered incorrectly	9	35,0
Did not know	11	42,0

When asked if they 'have ever studied the human body?', 50% said yes. This leads one to inquire about the other students, who probably did not study the human body correctly in the 38%, or 12% in any way, being subject to vulnerability issues, data shown in Figure 1.



**Figure 1. Number of elementary students, who had previous knowledge about human body**

The previous questionnaire, applied to students before the workshops, in one of their questions, aimed to identify the possible professional choice of elementary school students. Data shown in figure 2, where the predominance of choice by the medical profession is perceived.



**Figure 2. Professions desired by the students for the professional future**

It is understood that affinity for the health area was already aroused in the students, being evidenced by the profession of doctor, with 32% of the choices. 8% do not know which profession they want in the future, but probably after the interactive lesson held, the number in relation to the professions in the health field tends to grow, not only aimed at medicine but also nursing and other health professions, because there are educational institutions with courses focused on health sciences in the municipality and region. In adverse to the profession of medicine is the profession of teacher, with 4% of the choices, which instigates to reflect which factors can influence the disinterest for the future career of professor.

## DISCUSSION

According to Fonteneles (2016, p. 435) there are "three axioms consensual regarding the evaluation of the teacher, namely: (1) the best teacher is the most experienced; (2) with more training; (3) more committed; ". In this context, the science teacher has met these three requirements, which favors the growth of the group's knowledge, also contributing to the students' correct behavior in dealing with children in the classroom and in their professional lives. For Baptista et al.(2015), knowing the body is of fundamental importance, due to the processes that result from the transition between the phases of life, especially from childhood to adulthood, directly influence the life of these individuals. Their ignorance may be a cause of social and psychological vulnerability, exposing them to vulnerabilizing behaviors and practices. The absence of science labs is not only found in public schools, but also in private networks. Thinking about it, a similar project, the 'Human Anatomy for Elementary and Middle School', which included 576 public school students and 504 private students, on a visit to the Human Anatomy laboratory of the Institute of Biosciences of UNESP Rio Claro - SP, motivated the students with the knowledge acquired, from the contact with the cadaveric pieces (CERRI et al., 2015). In a study by Silva et al. (2016), in a similar project to the 'Anatomizing' project, 91.9% of the students did not know any anatomy laboratory. Before the process of visitation to the laboratories, the difficulty was due to the locomotion of the students, which was responsibility by the participating schools, students and teachers, what prevented it from contemplating more schools.

In the 'Anatomizing' project, when carried out in the private school, it presented similar impasses, since it was not possible to have no laboratories in its premises, besides the impossibility in financial terms to visit the anatomy laboratory of the Federal University of Piauí in Floriano. However, the university was available to the school for future visits to the laboratory structure. According to Silva et al. (2016), the teaching career has become lagged and devalued, by low salaries, extensive hours, stress and abuses in classrooms by students, what was lead to decline in the choice of an undergraduate degree or work in the area.

## Conclusion

With the completion of this stage of the project, the objectives of sharing knowledge acquired in the university, in the human anatomy discipline, were reached to the extent that the students' understanding of the elementary school was understood on the topics addressed. The content was explained in a dynamic and interactive way, adding value to the project, as well as to the experience of integrating academic reality with elementary education, enhancing students' curiosity in the health area and awakening the academic sense of teaching. This project is an opening of horizons for the students of the nursing course because it brings greater contact with the university extension, the experience of teaching and research in an integrated way in a discipline, fact not to much implemented, although ideal. It aroused the interest for teaching, for taking the student to put in the place of the teacher and, in this way, to develop skills such as oratory and autonomy in presentations. The project was completed and achieved the goal of integrating knowledge from the upper level to elementary education through the exchange of knowledge. In addition, it provided a space for children to address their doubts regarding diseases related to the systems being addressed. Although not ideal, the structural and teaching conditions of the private school approximate what is recommended for good teaching practice. Although there are deficits to be repaired, such as lack of laboratories and the incentive, by the coordination, to the use of active methodologies, that help in the accomplishment of a dynamic class and the better understanding on the part of the students.

## REFERENCES

- BAPTISTA, V. et al. Concepções sobre anatomia humana de alunos do ensino médio da cidade de Cuité-PB: funções e relações com cotidiano. *Revista Brasileira de Pesquisa em Educação em Ciências*, v. 15, n. 1, p. 059-078, 6 jul. 2015.
- BRASIL. Ministério da Saúde. Resolução nº 196. Comissão Nacional de Ética em Pesquisa. Conselho Nacional de Saúde. Brasília: MS. 2016
- CERRI, B. R. et al. Projeto de extensão: anatomia humana para os ensinos fundamental e médio. 8º Congresso de extensão universitária da UNESP, p. 1-6, 2015. Disponível em: <<http://hdl.handle.net/11449/142695>>. Acesso em: 11 abr. 2019.
- FILHO, Antônio Mourthé et al. Refletindo o ensino da Anatomia Humana. *Enfermagem Revista*, [S. l.], 16 ago. 2016. Disponível em: <https://docplayer.com.br/49319033-Artigo-original-refletindo-o-ensino-da-anatomia-humana-reflecting-the-teaching-of-human-anatomy.html>. Acesso em: 21 mar. 2019.
- FONTENELES, I.C.S; MARQUES, E.S.A; ARAUJO, F.A.M. *Pesquisa e Educação: História, formação e gestão*. In:

- FONTENELES, I.C.S.; SALES, L.C. No Trilhar do Ensino: Políticas de Valorização dos Professores. Edufpi. 1 ed. Jan de 2016
- JUNQUEIRA, P.S.A.S. et al. Exposição e integração entre a anatomia humana e as manifestações artísticas. Revista UFG, v. 16, n. 19, 30 out. 2017.
- NICÁCIO, S. V.; ALMEIDA, A. G.; CORREIA, M. D. Uso de jogo educacional no ensino de Ciências: uma proposta para estimular a visão integrada dos sistemas fisiológicos humanos. In: Encontro Nacional de Pesquisa em Educação em Ciências, Florianópolis, SC, 11, 2017 Disponível em: <<http://abrapecnet.org.br/enpec/xi-enpec/anais/resumos/R2483-1.pdf>>. Acesso em: 11 abr. 2019.
- SILVA, C.H. et al. CONHECENDO A ANATOMIA: A integração da Universidade com a educação básica. Disponível em: <<https://www.revistas.ufg.br/rir/article/view/40965>>. Acesso em: 11 abr. 2019.
- SILVA, L.M.S. et al. Relação entre a desvalorização profissional e o mal-estar docente. RELACult - Revista Latino-Americana de Estudos em Cultura e Sociedade, [S.l.], v. 4, fev. 2018. ISSN 2525-7870. Disponível em: <<http://periodicos.claec.org/index.php/relacult/article/view/752>>. Acesso em: 27 abr. 2019. doi: <http://dx.doi.org/10.23899/relacult.v4i0.752>.

\*\*\*\*\*