

## University extension: experience report about aquatic physical therapy during graduation

### Extensão universitária: relato de experiência em fisioterapia aquática na graduação

### Extensión universitaria: relato de experiencia en fisioterapia acuática en la graduación

Received: 15/12/2017

Approved: 09/05/2018

Published: 01/08/2018

Tulio Fernandes de Almeida<sup>1</sup>

Larissa de Oliveira e Silva<sup>2</sup>

Cláudia Barsand de Leucas<sup>3</sup>

This work aimed to describe an undergraduate experience in the Physical Therapy course, which was a part of the Life Quality for All Project (PQVT), regarding the approximation of the students to Aquatic Physical Therapy. Here are presented statements from the undergraduates of the physical therapy course that were registered in the final report of the PQVT from the 1st semester of 2017. The result was an articulation of the triad teaching, research and extension, as a possibility of bringing the Physical Therapy undergraduate closer to the aquatic environment, emphasizing the importance of an area with many possibilities for action.

**Descriptors:** Physical therapy specialty; Hydrotherapy; Quality of life, Disabled persons.

O trabalho teve como objetivo descrever a experiência acadêmica no curso de Fisioterapia do Projeto Qualidade de Vida para Todos (PQVT), quanto à aproximação para Fisioterapia Aquática. Apresenta-se relatos dos graduandos do curso de fisioterapia que constam no relatório do final PQVT do 1º semestre do ano de 2017. Como resultado tem-se a articulação da tríade ensino, pesquisa e extensão, como possibilidade de aproximar o graduando de Fisioterapia ao ambiente aquático, e enfatizar a importância sobre uma área com diversas possibilidades de atuação.

**Descritores:** Fisioterapia; Hidroterapia; Qualidade de vida; Pessoas com deficiência.

El trabajo tuvo como objetivo describir la experiencia académica en la carrera de Fisioterapia del Proyecto Calidad de Vida para Todos (PCVT), en cuanto a la aproximación para Fisioterapia Acuática. Se presentan relatos de los graduandos de la carrera de fisioterapia que constan en el informe del final PCVT del 1er semestre del año de 2017. Como resultado se obtiene la tríade de enseñanza, investigación y extensión, como posibilidad de aproximar al graduando a la Fisioterapia y al ambiente acuático y enfatizar la importancia sobre un área con diversas posibilidades de actuación.

**Descritores:** Fisioterapia; Hidroterapia; Calidad de vida; Personas con discapacidad.

1. Undergraduate student in Physical Therapy at Pontifícia Universidade Católica de Minas Gerais (PUC/MG). Belo Horizonte, MG, Brazil. Participant of the Life Quality for All Project (PQVT). Member of the Study Group in Corporal Practices and Inclusion (GEPCI) of the Department of Physical Education. ORCID: 0000-0002-8141-3848 E-mail: tuliofalmeida@hotmail.com

2. Physical therapist Member of the GEPCI of the Department of Physical Education at PUC/MG Belo Horizonte, MG, Brazil. Physical therapist of the rugby team Minas Quad Rugby. ORCID: 0000-0003-4277-199X E-mail: larissadeoliveiraesilva@hotmail.com

3. Physical Educator. Specialist in School Physical Education. Specialist in Inclusive Education. MS in Education. PhD in Educational Sciences. Professor and coordinator of the GEPCI of the Department of Physical Education of PUC/MG, Belo Horizonte, MG, Brazil. ORCID: 0000-0002-2584-0669 E-mail: cbarsand@gmail.com

## INTRODUCTION

This work reports on an experience of which many students from the physical therapy course have been a part of, in a multi-disciplinary university extension project. Physical therapists need to have a holistic education, that enables them to think and act not only according to the subject itself, but also as they relate to other fields of knowledge<sup>1</sup>.

Seeking to overcome a gap in their education, due to the current syllabus of their course<sup>2,3</sup>, undergraduate students from the course of Physical Therapy at the university PUC Minas found in a university extension the opportunity to experience a practical intervention in the aquatic field through activities for people with disabilities<sup>4</sup>.

This experience has enabled the students to expand their learning, so it includes content beyond the basics that are taught in the graduation course, which allows them to broaden their look towards people with disabilities and become more humane about them. In addition, an approximation, integrated to the social and environmental context of this public, has been taking place, as well as an expansion of a humanized perspective about intervention.

This perspective is a part of the guiding principles of the Life Quality for All Project (PQVT), which aims to share specific knowledge from many courses that have been communicating and complementing each other within the university, as they contribute for the improvement in the quality of life and clinical framework of those who seek the project<sup>5</sup>, using an approach that is different from that of the subjects in the graduation course that are closer to the context of people with deficiency.

The group of participants in the PQVT is very heterogeneous and contains

many types of deficiency, such as: visual, physical, intellectual and multiple. The PQVT aims to promote, through the practice of aquatic activities for people with deficiencies, an improvement to their quality of life and that of their relatives, aiming to promote health and work as preventive measures. Aquatic activities take place in a different medium than usual, and as such, demand that all those who want to practice them to adapt, up to a certain point, to the characteristics and specificities of this medium<sup>6</sup>.

The PQVT was implanted in 2014 by the Physical Education department of the Catholic Pontifical University of Minas Gerais (PUC-MG) and works in the facilities of the Sports Complex of the university, in the unit Coração Eucarístico. The Pro-rectory of Extension (PROEX) finances the program.

The PQVT is maintained by a multi-disciplinary team that includes undergraduates from the Physical Education, Physical Therapy, Speech-language Pathology and Psychology courses. Activities take place from Tuesdays to Fridays, from 1 p.m. to 5 p.m., and enable the undergraduates of the Physical Therapy course at PUC-MG to get in contact with people with deficiency and with the possibilities of the interaction between Physical Therapy and the aquatic environment. The undergraduate does not act only clinically, focused on the deficiency, but on the person as a whole.

This work aimed to describe an undergraduate experience in the Physical Therapy course which was a part of the Life Quality for All Project, regarding the approximation of the students to Aquatic Physical Therapy.

## METHOD

This study is an experience report made by an undergraduate student of the Physical Therapy course at PUC-MG who participated in the extension project PQVT. Its objectives are reporting all the main actions conducted in the PQVT in the first academic semester of 2017 and its contributions for student's education and approximation to the aquatic environment.

The physical therapy undergraduates actively participate in the PQVT discussion group, where the team creates a broad plan for the month and expose ideas, in addition to having a specific discussion group where interventions are planned and whose members help each other, exchanging theoretical bases (books, articles, courses), which is especially helpful, as they do not have the Aquatic Physical Therapy/Hydrotherapy discipline in their syllabuses. These meetings were essential for collecting the statements, analyzing and discussing them.

All statements presented here were in the final report of the 1st semester of 2017. That is because every semester in which the project is conducted the students write a report, stating their perception about the participation in the program in the semester and offering suggestions and criticism. This feedback is used to improve the PQVT actions and the sessions it offers. In general, the reports of the physical therapy undergraduate students are highly positive, since taking part in the project complements their education.

## RESULTS

Some reports take into account how rich is the knowledge that the PQVT makes available for the undergraduate students who take part in the project, and are examples of how much this university extension course has been important in their education:

*"The project was very important for my personal growth and as a Physical Therapy undergraduate, since I was part of a team with many fields of health and could help the student in the development of activities in and out of the pool."* (Student of the 5th semester of Physical Therapy and participant of the PQVT since the second semester of 2016).

*"The project was and is a place where I feel that I am free regarding the choices of intervention and in the dialogue with the participants from other courses, being respected by both. In the PQVT, thanks to researches conducted and presented in congresses and symposiums, I saw myself in scientific initiation projects, especially those related to sport for people with deficiencies. "I am very grateful for the opportunity for being a part of a project in which the possibilities for growth are innumerable, even in the internal and external scope of the university."* (Student of the 10th semester of Physical Therapy and participant of the PQVT since the first semester of 2015).

*"The project was a unique experience offering great learning opportunities. The promotion of quality of life is the main objective of the project and it is offered to our students as they apply the knowledge of an extremely rich multi-disciplinary team, not only offering simple knowledge to us, but an amazing experience as professionals and people."* (Student of the 5th semester of Physical Therapy and participant of the PQVT since the second semester of 2016).

*"The experiences offered by the extension course that is the PQVT are extremely important for my development, especially for the way they focus on the context of the person with a deficiency and not on the structure, we learned how the pool is an incredible ally in the interventions, notions of hydrotherapy influence a lot in the results found, in addition to the role of this extension course as a scientific initiation project."* (Student from the 7th semester of Physical Therapy and participant of the PQVT since the second semester of 2015).

## DISCUSSION

After the structure of the intervention of the PQVT was build, Physical Therapy started having an active role, contributing meaningfully in the multi-disciplinary education of the student<sup>7</sup>, as well as in the improvement of the health conditions of the people from the community who participated, thus contributing as a reference and counter-reference service for

the Unified Health System (SUS), regarding orthopedic and neurological consultations, orthoses and other necessary equipment<sup>8,9</sup>.

Actions take place involving children, adolescents, adults and elders with neuropsychomotor disfunctions, delayed sensory psychomotor development, cognitive deficits, autism spectrum disorder, genetic syndromes accompanied by hypotonia and medulla lesions. The professionals offer specific guidance during the activities, as in the best way to position parts of the body, muscle tone adequation, reinforcement and stretching<sup>10</sup>. The professional also provides guidance for actions that can be carried out in the residence of the participant.

Resolution CNE/CES n. 4, from February 19, 2002, establishes the directives of the activities of the physical therapist and the posture of the Higher Education Institutions. It prescribes that the professional must act in all levels of attention to health, and that physical therapy education must be up to date with all new information and techniques<sup>11</sup>.

The knowledge about aquatic Physical Therapy, considered as part of the physical therapy knowledge, will enable the physical therapist to understand the possibilities of using the aquatic medium, its benefits, limits and contraindications<sup>12</sup>. Although there is an academic understanding about how important the knowledge about the possibilities offered by aquatic mediums is, few physical therapy courses in the city of Belo Horizonte include hydrotherapy in their syllabuses.

The amount of training in hydrotherapy offered to undergraduate students of physical therapy is not on par with the number of schools that teach the subject worldwide. In some countries, there is a minimum recommended of theoretical and practical hours and some advocate for students to have internships with physical

therapists with hydrotherapy experience. The limitations of the undergraduate training in hydrotherapy lead to implications in post-graduation studies<sup>13</sup>.

The experience in the PQVT contributes for undergraduate students to understand about the aquatic medium and how important it is as a complement to the traditional clinical treatments, all of which is then underpinned by the practice sessions in partnership with the PUC Minas Physical Therapy Clinic. The aquatic medium has the potential to offer many improvements to the individual. Among these improvements, some stand out, such as the increase in muscular strength and in the ability to develop daily activities, postural balance, flexibility, corporal composition and in the cardio-respiratory conditioning, when the activity is accompanied by an adequate prescription for such objectives<sup>10,14-16</sup>.

The interaction of the many fields of knowledge that integrate the PQVT team has made it possible to guide interventions based on individual and family demands. From this perspective, the undergraduate student experiences situations, during the extension course, that are very similar to the real context of activities of a professional in the health field who is part of a multi-disciplinary team and care for people with deficiency, as they always articulate the theoretical bases for each field of knowledge, aiming to improve the quality of life of participants. This has been positively impacting in the professional and personal posture of the PQVT team, which shows how necessary the extension is as an experience during the graduation course<sup>17,18</sup>.

## CONCLUSION

The participation in the PQVT has been offering to the students a different experience, beyond clinical care. The

performance of actions together with other fields of knowledge enables the students to become more sensible to the idea of a humanized care, reiterating the principles established by the institution, which aims at promoting human and social development.

To contributing to the humanist and scientific education of competent professionals, based on ethical and solidary values and committed to the common good, as brought about by the production and dissemination of science, art and culture, and by multidisciplinary and integration between University and society.

Based on the PQVT experiences, it is possible to say that this first contact with the aquatic medium has been making it possible for the future physical therapy professionals to expand their knowledge about the possibilities of intervention in the aquatic medium, now understood as a possible medium for professional activities.

Stand out the importance of having an experience with hydrotherapy during graduation, overcoming the health care models that only consider clinical treatment and advancing professional actions which can signify care in an aquatic medium as something more than a complementary therapy.

The importance of the multi-disciplinary actions should also be highlighted as something that should always take place, since it makes the experience more valuable for the professionals involved and, especially, is good for the person being cared for, as it presents them with important results such as improvements in their quality of life, according to reports from family members.

Therefore, this work reiterates the importance of the participation of undergraduate students in this university extension project, since, based on the articulation of the triad teaching, research and extension, it has been offering the

undergraduate Physical Therapy students opportunities to experience the aquatic medium, in addition to emphasizing the importance of having knowledge about an area in which there are many chances for professional and multi-disciplinary practices.

## REFERENCES

1. Assad MAC. A Interdisciplinaridade e a Fisioterapia. *Olho Mágico*. 1998; p. 12-13.
2. Sumiya A, Jeolás LS. Processos de mudança na formação do fisioterapeuta: as transições curriculares e seus desafios. *Acta Scientiarum - Human and Social Sciences* 2010; 32(1):47-53.
3. Teixeira RC. Aderência dos cursos de Fisioterapia da região Norte às Diretrizes Curriculares Nacionais. *Fisioter Mov*. 2012; 25(1):47-54.
4. Amorim EG, Neta OM, Guimarães J. A deficiência em foco nos currículos de graduação da UFRN: uma abordagem histórica (1960-2015). *HOLOS*, 2016; 32(2):231-48. Cited in: 05/10/2017 Available from: DOI: 10.15628/holos.2016.4000
5. Leucas CB et al. Projeto de extensão universitária PQVT: Uma experiência multidisciplinar na graduação. In: V Congresso Paradesportivo Internacional, Out- 2016, Belo Horizonte, Brasil. *Anais V Congresso Paradesportivo Internacional*, 2016; p. 197-201.
6. Rodrigues MN, Lima SR. Atividades aquáticas para pessoas com deficiência. *Revista brasileira de ciências do esporte* 2014:369-81.
7. Feriotti ML. Equipe multiprofissional, transdisciplinaridade e saúde: desafios do nosso tempo. *Revista do NESME*. 2009; 2(6):113-219.
8. Gentil DF, Abilio ES, Cordeiro MJJ. Limites e desafios curriculares na formação de profissionais para atuar no Sistema Único de Saúde. *Interfaces da Educ*. 2015; 6(17):77-96.
9. Maia FES, Moura ELR, Madeiros EC, Carvalho RRP, Silva SAL, Santos GR. A Importância da inclusão do profissional fisioterapeuta na atenção básica de saúde. *Revista da Faculdade de Ciências Médicas de Sorocaba* 2015; 17(3):110-5.
10. Neto UG, Denari FE. Natação como inclusão para crianças com necessidades educacionais

especiais. Londrina – Pr - ISSN 2175-960X. V Congresso Brasileiro Multidisciplinar de Educação Especial.

11. Conselho Nacional de Educação/Câmara de Educação Superior Resolução CNE/CES nº4, de 19 de fevereiro de 2002. Institui Diretrizes Curriculares Nacionais do Curso de Graduação em Fisioterapia.

12. Pardo, MS, Candelero JM. Ensino de Hidroterapia na Graduação. 2014; p. 1-6.

13. Champion MR. Hidroterapia: princípios e prática. 1º Ed. São Paulo Manole Ltda. 2000; p.4.

14. Parreira P, Baratella TV. Fisioterapia aquática. 1 ed. São Paulo: Manole. 2011; 317.

15. Pimenta AR. Programa de atividade aquática adaptada para pessoas com transtorno de espectro autista: avaliação dos efeitos das habilidades aquáticas e nas variáveis comportamentais. Dissertação de mestrado da Universidade do Porto, 2012.

16. Cunha GFR. Raposo MB. Atividades aquáticas e inclusão na educação infantil: benefícios neuropsicomotores para crianças com paralisia cerebral espástica. Monografia apresentada ao curso de especialização em desenvolvimento humano, educação e inclusão, da Faculdade UAB/UNB. Brasília 2011.

17. Leucas CB, Almeida TF, Silva LO. Extensão Universitária: Formação Transdisciplinar na Graduação. In: IV Congresso Nacional de Educação Católica. Belo Horizonte. Anais do IV Congresso Nacional de Educação Católica. 2017; p. 33-36.

18. Leucas CB. et al. Analisando a qualidade de vida de pessoas com deficiência de um projeto de extensão por meio do Protocolo de Levantamento de Problemas para a Reabilitação. Conecte-se! Belo Horizonte. 2017; p. 85-94.

#### CONTRIBUTIONS

**Tulio Fernandes de Almeida** contributed to the article reporting his experience on the extension project, analyzing and interpreting the reports from the records of the project. **Larissa de Oliveira e Silva** took part in the analysis and interpretation of the reports from the records of the project, as well as in the writing and critical review of the article. **Cláudia Barsand de Leucas** advised on the elaboration of the article and performed a critical review.

#### How to cite this article (Vancouver)

Almeida TF, Silva LO, Leucas CB. University extension: experience report about aquatic physical therapy during graduation. REFACS [Internet]. 2018 [cited in *insert day, month and year of access*];6(3): 494-499. Available from: *insert access link*. DOI: *insert DOI link*.

#### How to cite this article (ABNT)

ALMEIDA, T. F.; SILVA, L. O.; LEUCAS, C. B. University extension: experience report about aquatic physical therapy during graduation. REFACS, Uberaba, MG, v. 6, n. 3, p. 494-499, 2018. Available from: *<insert access link>*. Access in: *insert day, month and year of access*. DOI: *insert DOI link*.

#### How to cite this article (APA)

Almeida, T.F., Silva, L.O. & Leucas, C.B. (2018). University extension: experience report about aquatic physical therapy during graduation. REFACS, 6(3), 494-499. Recovered in: *insert day, month and year of access*. Available from: *insert access link*. DOI: *insert DOI link*.