

# Pain curriculum for graduation in Physiotherapy in Brazil

## *Currículo em dor para graduação em Fisioterapia no Brasil*

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### ABSTRACT

**BACKGROUND AND OBJECTIVES:** To introduce the curriculum in Pain for Graduation in Physiotherapy, suggesting its use for academic training in Brazil.

**CONTENTS:** Considering that physiotherapists should be prepared to engage in the health care professional team assisting patients with different kinds of pain understanding the role of each professional, a group of physiotherapists with academic and clinical experience in pain treatment has developed, after consensus, this curriculum of pain for physiotherapy, which highlights the role of this professional in the health care team and the development of a therapeutic relationship with patients, favoring patients' autonomy and education, as well as the strategies for pain evaluation and management.

**CONCLUSION:** The specific content of this pain curriculum can be integrated into different programs/courses, using the most adequate structure and educational method with regard to professional needs and their demands. Physical therapy, pain and models of academic training in health are discussed.

**Keywords:** Curriculum, Education, Pain, Physical therapy.

### RESUMO

**JUSTIFICATIVA E OBJETIVOS:** Apresentar e divulgar o currículo em dor para graduação em Fisioterapia, sugerindo sua utilização para formação acadêmica no Brasil.

**CONTEÚDO:** Considerando que o fisioterapeuta deve ser preparado para integrar a equipe profissional de cuidados de paci-

entes com diferentes tipos de dor, compreendendo a atuação de cada profissional, um grupo de fisioterapeutas com experiência acadêmica e clínica no tratamento da dor elaborou, após consenso, o currículo nuclear de dor para fisioterapia, o qual destaca o papel desse profissional na equipe e na construção de uma relação terapêutica com os pacientes, favorecendo autonomia e educação do paciente, além das estratégias para avaliação e manuseio da dor.

**CONCLUSÃO:** O conteúdo específico deste currículo de dor pode ser integrado em diferentes programas/cursos, usando a estrutura e o método educacional mais adequado no que tange às necessidades profissionais locais e as suas demandas. Discute-se a fisioterapia, a dor e modelos de formação acadêmica em saúde.

**Descritores:** Dor, Currículo, Educação, Fisioterapia

### INTRODUCTION

Post-war period is a historical landmark for physiotherapy, due to the need to rehabilitate surviving veterans and civilians. Although there is this social landmark of profession recognition, its techniques and strategies are millenarian. There are records in archeological Egyptian, Hindu, Greek, Roman, Chinese and Japanese studies from approximately 3000 b.C. about therapeutic benefits of massage<sup>1</sup>, today studied and based on Manual Therapy techniques.

In the history of physiotherapy, the profession goes through a difficult period in the 18<sup>th</sup> Century, which lasted for approximately 200 years. In this period, medicine was academically developed within a biomedical, linear and rigid model, in a powerful and intense movement, basing medicine on diagnostic investigation and on the tireless search for permanent healing. The notion of health becomes associated to medical care and follow up, without encouraging self-care and "good life habits". The manipulation of medical-hospital care is present and "steals" dignity<sup>2</sup>.

Academic graduation of health professionals was based on this linear and hierarchical model where "symptomatic medicine", which adapted therapy to patients' complaints and symptoms, was for years labeled as "low quality medicine" associated to the inability of professionals to define a single and accurate diagnosis to develop the treatment plan. Physiotherapy, similarly to palliative medicine, has gained space when classic/traditional physicians started to say "there is nothing more to be done"<sup>3,4</sup>, in a simplistic way, to the biomedical model (synonym to technocentric or biocentric model)<sup>6</sup> of cause and consequence. Within this cause and consequence context, physiotherapy was prescribed for being a "distraction" option for patients without "permanent cure" according to medical evaluation.

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In the last decades, physiotherapy has traveled between the area subordinated/dependent on prescription and others, and current scenario where physiotherapists are part of the multidisciplinary team, discussing cases and contributing for the development of a treatment plan. In a similar context, palliative medicine and pain specialist physicians overcome their challenges.

The biopsychosocial model proposed by psychiatrist Engel, in 1977<sup>3</sup>, introduces a new paradigm to health/disease inserting it in a biological, psychological and social context. According to this movement, pain, which was previously defined as associated to real injury, is now studied and treated as an unpleasant emotional sensation associated to real or potential injury<sup>4</sup>, showing that pain is a dynamic phenomenon, where rigid neurophysiologic concepts are abandoned and give space to pain in a multidimensional context dependent on the interaction of several endogenous and exogenous mechanisms<sup>5</sup>.

Pain is a common problem and primary therapeutic objectives of physiotherapists when treating painful patients are to improve pain and associated dysfunction, function improvement as well as health and daily life wellbeing promotion<sup>6</sup>. Physiotherapists should participate in the facilitation process of understanding pain by patients. For most effective analgesic therapies, physiotherapists have to understand pain biological basis and psychosocial and environmental components, as well as their impact on pain experience throughout life<sup>7</sup>. Physiotherapists must be familiar with ways to evaluate and measure pain<sup>8</sup> and should be able to implement different strategies of analgesic therapies based on scientific evidence. Focus is to encourage early patients' commitment to active pain management strategies (what patients have to do) and not to passive interventions (what you have to do for patients). So, interventions proposed by physiotherapists should be established as part of a global approach to manage pain, which should also incorporate self-care.

Even considering that physiotherapists are not responsible for pharmacological interventions, they must have enough knowledge about pharmacological agents and their adverse effects, as well as being able to optimize the therapeutic window offered by pharmaceutical agents to encourage the use of active management strategies adequate to each patient. It is critical to have patient-centered collaborative and holistic view of the needs of patients with pain and dysfunction.

Physiotherapists should also be prepared to integrate the health-care team of painful patients, understanding the role of each professional. In addition, they should be able to act on primary, secondary and tertiary health attention levels, as well as being qualified to act as first contact professionals<sup>6</sup>.

The imminent need to improve Pain teaching in Brazil and, especially, since graduation, is the subject of this article. The physiotherapists committee of the Brazilian Society for the Study of Pain (SBED) – made up of expert clinicians and researchers on the study of pain – has queried specialized literature, has asked the cooperation of specialists and has identified major aspects of pain which should be addressed still at graduation level. The pain curriculum of the International Association for the Study of Pain was used as important reference, the content of which was carefully studied, evaluated and discussed by such specialists.

So, the physiotherapists committee has prepared this specific pain curriculum, adapting or adjusting the content to Brazilian population dynamics and reality, as well as to professional praxis in force in Brazil. The objective of the pain curriculum for Graduation in Physiotherapy is to help the integration of this subject to different programs/courses, using the most adequate structure and educational methods with regard to local professional needs and their demands.

## CONTENTS

### Principles

The following principles guide the development of the curriculum for physiotherapists starting in the study of pain and had as model the Declaration of Montreal (IASP 2010).

Article 1. All people have the right to pain management, without prejudice.

Article 2. The right of all painful people to know their pain and be informed about how it can be evaluated and managed.

Article 3. The right of all painful people to have access to adequate pain evaluation and management by a duly trained health professionals' team.

Pain is considered a biopsychosocial experience including sensory/discriminative, emotional/motivational, cognitive, behavioral, spiritual, cultural and developmental components.

Pain may be acute, persistent, or both, and its duration guides the development of a therapeutic plan.

Pain should be broadly and consistently evaluated with valid and reliable evaluation tools.

Patients have the right to the best possible pain management.

Pain evaluation and management are integral aspects of the physiotherapeutic treatment; they should involve patients and their relatives and should be recorded in a clear and accessible manner.

Patients and their relatives' education on pain and self-care are critical components to the physiotherapeutic plan. Physiotherapists are essential members of the multidisciplinary pain team.

Students should be familiar with theoretical models supporting interventions and empirical evidences for their efficacy; it is also important to evaluate from the epistemological point of view to consider the interim character of the concept of pain, having in mind that knowledge is constantly being built. Professors are encouraged to adopt a critical evaluation perspective as the basis for decision-making when reviewing benefits and limitations of their interventions.

### Objectives

Physiotherapists should be able:

- To apply basic pain science knowledge to evaluate and manage painful people;
- To promote health and wellbeing through pain and dysfunction prevention;
- To evaluate and measure biological and psychosocial factors contributing to the presence of pain, movement dysfunction and incapacities, using valid and reliable measurement tools;
- To identify barriers among professionals, systems, patients, relatives and community for effective pain evaluation and management;

- To develop evidence-based physiotherapeutic program in cooperation with patients, directed to changing pain, improving function and decreasing incapacities, being limited to the management of an intervention program with regard to action in physiotherapy and respecting the actions of other health professionals;
- To implement therapies including patients' education, active approaches, such as functionally oriented movement re-education, exercises (including grading), and passive strategies, such as manual therapy and electrothermophototherapy;
- To show awareness of their practical competences to evaluate and manage painful patients using practical strategies based on evidences for clinical decision-making;
- When adequate, to refer patients for evaluation by other health professionals, according to their needs, establishing an active professional relationship with other professionals following up the patient;
- To recognize people at risk of undertreatment of their pain (example, individuals with verbal communication disorders, neonates and with cognitive deficits);
- To practice the profession according to the Code of Ethics, which recognizes human rights, diversity and recommendation of the non-maleficence principle;
- To critically reflect on effective ways of working with painful patients and improving care for this population;
- To regularly update their knowledge on pain and related issues;
- To understand that specific knowledge on the area is constantly changing and that professionals should develop a high level of criticism with regard to used concepts and techniques, always looking for the possibility of proving through quantitative and/or qualitative techniques and patients' satisfaction. Professionals should be aware that part of any pain therapy involves a placebo or nocebo effect and should constantly try to know through ongoing education the active effect of resources/techniques used to diagnose and treat, understanding that this active effect may be predominantly physical, psychological or social;
- To act in all health attention levels, engaging in health promotion, maintenance, prevention, protection and recovery programs;
- To act, in multiprofessional, interdisciplinary and transdisciplinary manner, whenever possible and necessary.

## CURRICULUM CONTENTS

### Pain multidimensional nature

- A) Problem magnitude: health-disease process and its determining/conditioning factors; limitation, dysfunction and incapacity; pain epidemiology as public health problem in Brazil and worldwide, with social, ethic and economic considerations.
- B) Current theories on anatomy, physiology and psychology of pain and its relief, according to knowledge evolution, since classic to more recent concepts.
- C) Definition of pain and its multidimensional nature, considering conceptual updates published in IASP<sup>9</sup> websites and its Brazilian chapter SBED<sup>10</sup>.

- D) Impact of age, gender, family, culture, religion, environment, myths and beliefs on pain.
- E) Role and responsiveness of physiotherapists in managing pain, and integration of physiotherapists in a multidisciplinary team; legal aspects related to physiotherapists' professional responsibility<sup>11-13</sup>.
- F) Role and responsiveness of other health professionals in the area of pain management and merits of interdisciplinary cooperation; legal aspects and bases of interdisciplinary and multiprofessional relationships; team communication and relationship.
- G) Integration of physiotherapeutic interventions into holistic management strategies in cooperation with other professionals (health professionals or not), introducing different physiotherapeutic modalities available in pain clinical practice, which still do not have scientific evidences, but which are widely used<sup>6</sup>.
- H) Pain and life expectation (physiologic and psychosocial factors, implications for evaluation, measurement and intervention); persistent chronic pain and its implications on individual's relationship with his internal (body) and external (family, society) environment; measurements aimed at detection of resilience and physical organic, psychic (behavioral, emotional, cognitive) and socioenvironmental (labor, family, community, religion) impacts<sup>14</sup>.
- I) Implications and pain evaluation in neonates, during childhood, adolescence, adulthood and senescence<sup>15</sup>, as reference for physical, psychological, educational and social development and integrating them to the intervention strategy and also considering individuals with communication and cognition deficits.
- Specific problems faced by painful elderly with regard to the influence of comorbidities, services with adequate access and maintenance of independence.

### Basic science<sup>16</sup>

- Understanding and describing adequate nociceptors and stimuli to activate nociceptors in different types of tissues (skin, muscle, joint, viscera); explaining afferent and efferent spinal cord innervations and different types of tissues, and how pain of different tissues is centrally processed;
- Defining and describing peripheral sensitization and how these changes are associated to pain perception;
- Describing neurogenic inflammation, neurotransmitters involved in this process, and how such neurotransmitters may contribute for peripheral pain processing;
- Understanding changes and the role of ion channels, excitatory and inhibitory neurotransmitters in peripheral nervous system and non-neuronal cells, and explaining how such changes are important for pain transmission processing;
- Describing pain pathways involved with pain discriminative sensory and motivational affective components;
- Describing and defining central sensitization and why it is similar or different from peripheral sensitization;
- Describing and understanding mechanisms explaining pain behaviors: referred pain, primary hyperalgesia, secondary hyperalgesia, allodynia, dysesthesia, hyperpathy, temporal and spatial summation and kinesiophobia;

- Understanding the role of excitatory and inhibitory neurotransmitters, as well as of central and peripheral nervous systems glia in potentiating pain transmission and changes resulting from tissue injury;
- Describing ascending pain transmission modulating pathways;
- Understanding differences between pain facilitation and inhibition, brain regions and neurotransmitters playing a role in this process;
- Understanding how nervous pathways may be activated by non-pharmacological therapies;
- Understanding long-term consequences of chronic pain on brain, spinal cord and peripheral tissues;
- Describing animal pain models; understanding what different animal models intend to mimic and why animal models are used to study pain;
- Understanding neuroimage tools and major brain regions underlying the painful experience, and how such changes depend on individuals' cognitive and emotional states;
- Comparing and contrasting theories on interactions between pain and motor function (example, Vicious cycle theory and Pain adaptation theory);
- Understanding types of pain in a neurophysiologic perspective: nociceptive, neuropathic and psychogenic;
- Understanding neuroplasticity, pain memory and onset of chronicity;
- Understanding how pain interacts with movements control and the role of plasticity of different tissues on associated dysfunctions.

### **Pain evaluation and management**

- A) Recognizing differences between acute, sub-chronic and chronic pain and implications for patients' evaluation and management, as well as understanding chronic pain worsening process, chronic postoperative pain and chronic pain disease<sup>17-19</sup>.
- B) Emphasizing the need for broad evaluation, using reliable and valid tools during pain acute phase to prevent onset of chronicity<sup>20</sup>.
- C) Using biopsychosocial strategy for pain and incapacity evaluation, since this interferes with pain multidimensional nature in relevant domains for physiotherapy practice<sup>17</sup>.
- D) Considering pain multidimensional nature, including adequate evaluation measurements for primary domains, such as: sensory, affective, cognitive, physiologic, psychological behavioral. Pain-related characteristics which can be measured: pain intensity at rest and movement, location, inhibition, temporal summation, spatial summation, ongoing modulation, skin and deep sensitivity.
- Different available tools are for screening, rather than for diagnosis, although sometimes their psychometric properties are high with regard to the gold standard, which is always the professional diagnosis. In addition, it is worth evaluating IMMPACT group recommendations<sup>21</sup> with regard to pain studies outcomes, considering as primary outcomes the pain scale, perception of improvement and patients' satisfaction, and that clinical chronic pain intensity improvement is of at least 30% and that tools should always be used to evaluate other variables such as anxiety/depression, catastrophic thoughts, mood, sleep, fatigue, kinesio-

- phobia and quality of life. Still, within this context, it is important to recognize populations for which these tools are validated<sup>20</sup>
- E) Recognizing and using the International Classification of Functioning and Disability (ICFD) as important method for pain classification and functional diagnosis<sup>22</sup>.
- F) Recognizing strengths and limitations of commonly used measurements for different pain dimensions: self-report, physical performance measurements including functional capacity evaluations, physiologic/autonomic responses measurements<sup>5,17</sup>.
- G) Recognizing placebo and nocebo effects and their interference with pain evaluation and measurement processes.
- H) Considering intrinsic and extrinsic factors which promote intraindividual variations on results obtained with different tools and pain evaluation scores.
- I) Changing pain evaluation strategies to correspond to inherent variability associated to patients' clinical presentation: individual factors (age, gender, etc.), sociocultural influences (religion, race, etc.), pain clinical characteristics (duration, anatomic site, etc.), pain type and state (neuropathic, cancer, etc.), vulnerable populations (communication barriers, cognitive deficits, etc.).
- J) Critically interpreting and evaluating (reliability, validity and responsiveness) and implementing available pain evaluation tools for: identification of sub-groups of patients accepted for treatment, establishment of clinical relevance and/or magnitude of patients' results.
- K) Understanding the need to monitor and review the efficacy of treatment/management and adequately modifying treatment and management strategies<sup>6</sup>.
- L) Understanding pain as the fifth vital sign and contributing for the implementation of the Painless Hospital program, with regard to hospital environment.
- M) Understanding the need to refer patients to other health professionals, as the case may be and in a timely manner, through the recognition of phenomena deserving specialized attention of other health professionals, as well as for other physiotherapists with different abilities and competences with regard to evaluating and managing different pain conditions.
- N) Understanding the importance and need for experimental animal studies for the study of pain, as well as recognizing and understanding evaluation tools used in animal experimental models.
- O) Identifying whether patients respond or not to certain intervention strategies and evaluating the need for changing approach.

### **Pain management**

- A) Showing ability to integrate patient's evaluation to an adequate treatment plan using clinical reasoning concepts and strategies<sup>6</sup>.
- B) Understanding the principles of effective therapist/patient/professional relationship to improve pain, promote function in optimal levels and decrease incapacity through the use of active or passive pain management approaches, as adequate. Physiotherapists should develop a fundamental role to motivate painful patients for the effective application of proposed therapy adequately using different motivational feedback methods to directly interfere with patients' symptoms improvement.

C) Assisting patients in the development of a daily routine to get support and, when necessary, readjusting habits and roles according to individual capacity and life situation, considering daily actions (gestural, postural, organizational, dietary, sleep, etc.). Patients should be encouraged to develop active and participative behavior on their treatment, being major responsible for their improvement<sup>23</sup>.

D) Understanding the need for involving family members and other relevant people, including employers, if adequate<sup>17</sup>.

E) Using a person-centered perspective to formulate collaborative intervention strategies consistent with physiotherapists' perspective.

F) Understanding pharmacology: pharmacological principles of drugs used to manage pain (non-opioids, opioids, adjuvant topic analgesics, local anesthetics), limitations of pharmacological intervention for chronic pain, importance of combining pharmacological and non-pharmacological strategies for chronic pain and use of strategies such as active evidence-based self-care. In addition, deeply understanding mechanisms and effects of iontophoresis and phonophoresis<sup>24</sup>.

G) Basically understanding therapeutic approaches of other healthcare areas: nursing, speech therapy, medicine, dentistry, psychology, occupational therapy.

H) Patients' education<sup>25,26</sup>:

- Recognizing the impact and evidence for the use of therapeutic education in neuroscience and self-care as critical part of pain management;
- Designing and applying adequate educational strategies based on educational science;
- Identifying the variation of available educational opportunities in therapeutic domains (injury, disease, medical and postoperative intervention) considering age, culture and gender;
- Considering the scope and evidence for/against different contemporary therapeutic educational styles (biomedical, psychological, neuroscience);
- Identifying important variables which may impact the understanding of results for patients (self-efficacy, level of instruction on health, comorbidities, culture), clinicians (pain related beliefs of the health professional), message (use of multimedia), and context (health insurance limitations; injury prevention).

I) Behavioral management<sup>17</sup>:

- Understanding and applying functional behavioral analyses of painful conditions;
- Evaluating the usefulness of screening tools to identify psychosocial factors predictive of persistent incapacity;
- Applying behavioral approaches (physical and cognitive-behavioral components) and evaluating the effects.

J) Exercise<sup>27</sup>

- Understanding parameters (e.g.: mode, frequency, duration, intensity/dose) of therapeutic exercises for pain relief;
- Understanding different physical exercise modalities and relate them to your objectives (example: motor control, resistance, strength, cardiovascular fitness exercises);

- Evaluating individuals' adaptation ability to the proposed exercise/dosimetry;
- Describing how to modify exercise parameters taking into account pain condition, age, psychosocial factors and health status;
- Recognizing the importance of implementing adjuvant therapies to treat issues regarding exercise prescription (e.g.: biopsychosocial, fear and avoidance behavior, catastrophizing, cognitive-behavioral therapy)<sup>28</sup>;
- Understanding the importance of patients' education in the prescription of therapeutic exercises, including the concept of motivation and grading to potentiate the efficacy of global therapy and compliance.

K) Reintegrating to work (paid and unpaid work)<sup>29</sup>:

- Identifying factors associated to prolonged loss of productivity and integrating strategies to overcome obstacles and return to work or readapt it;
- Understanding the role of ergonomic principles and modified accommodations in the workplace;
- Developing an intervention plan in coordination with employers/managers/bosses;
- Understanding Brazilian medical leave and return to work system.

L) For the following interventions<sup>30</sup>:

- Acupuncture and electroacupuncture;
- Biofeedback;
- Cryotherapy
- Transcutaneous electrical nerve stimulation (TENS, interferential, diadynamic, average frequency modulated along time);
- Russian, galvanic, microcurrents, transcranial electric stimulation with constant current and repetitive transcranial magnetic stimulation;
- Sensory stimulation;
- Motor imagetic;
- Laser;
- Orthoses;
- Virtual reality;
- Relaxation;
- Manual therapy (massage, manipulation, mobilization);
- Superficial and deep thermotherapy;
- Understanding proposed neurophysiologic mechanisms and/or biomechanical actions for each intervention, as well as their associated effects with regard to pain management;
- Understanding clinical application principles and current evidences for each form of intervention to manage different pain conditions;
- Having adequate theoretic and scientific basis for all proposed techniques.

### Clinical conditions

A) Understanding the use of physiotherapeutic strategies and interventions with regard to acute and/or chronic pain conditions. A list of different painful clinical conditions often treated by physiotherapists is presented below. Remember that other not

mentioned clinical conditions may also need physiotherapeutic interventions.

- Neck pain, back pain and low back pain;
- Arthrites;
- Headaches;
- Cancer pain;
- Fibromyalgia;
- Myofascial pain;
- Peripheral and central neuropathic pain;
- Complex regional pain syndrome;
- Cervicocraniomandibular disorder;
- Tendinopathies, bursitis and myositis;
- Adhesive capsulitis;
- Sprains;
- Postoperative pain;
- Pelvic pain.

## DISCUSSION

Inclusion of the Pain subject in academic teaching institutions is a broader movement than the noble cause of minimizing patients' distress and pain<sup>31-33</sup>. Studying pain as a dynamic phenomenon which might be amplified or inhibited by the context, separating acute pain symptom from chronic pain disease<sup>34</sup> under the paradigm of biopsychosocial context means breaking linear and rigid paradigms and recognizing that there is therapeutic limit in identified diseases, as well as there are those still not labelled<sup>35</sup>.

Importantly, this scientific trend should be translational, able to promote interdisciplinary relationships and to accelerate the bidirectional exchange of information between basic and clinical science aiming at giving a direction to laboratory basic research findings for applied environments involving human health<sup>36</sup>.

Many aspects should be considered for translational science effectiveness, such as technological development, clinical research, industrial productive process, commercialization of products, as well as health systems themselves. The network of relations and interests between basic and applied science and the translational potential of studies are complex and it is necessary to understand potential factors preventing the translation of basic scientific discoveries to clinical trials, and from these to clinical practice, making difficult health-care systems decision making processes<sup>37</sup>.

Conversely, one should not admit the priority use of clinical science information without duly understanding phenomena explained by basic science, which allows, by means of specific methods, to explain action mechanisms of interventions which are clinically used for therapeutic purposes.

However, for interdisciplinary studies to be developed by professors, it is necessary an interdisciplinary working methodology implying the integration of knowledge; transition from fragmented to unitary knowledge conception; overcoming the dichotomy between teaching and research, considering study and research as from the contribution of different sciences. Interdisciplinary methodology refers to

scientific freedom, based on dialog and collaboration, on ability to innovate, to create, to research, aiming not only at technical-productive appreciation but especially at reflexive education<sup>38,39</sup>. Interdisciplinarity allows questioning the fragmentation of different knowledge fields, looking for possible convergence points among different areas and epistemological relationship among disciplines.

Interconnections of disciplines help the integrated understanding of contents, enhancing students' knowledge. However, in our culture, the difficulty of institutionalizing interdisciplinary teaching in different schools remits to two facts: 1) most of the time, students learn from the simplest to the most complex, with slow advances requiring little reasoning, especially abstract reasoning; 2) interconnecting different contents and mastering different contents.

This conception assumes educators imbued with true critical spirit, open to cooperation, interchange among different disciplines, constant questioning of arbitrary knowledge disconnected from reality. On the other hand, it demands research, sharing and systematization of ideas, knowledge building, in an ongoing questioning and search process.

So, transversality and interdisciplinarity are, in this sense, ways of working with knowledge aiming at reintegrating isolated dimensions by the disciplinary treatment. With this, the intention is to have a broader understanding of reality which is often fragmented by available means to know it.

Within this perspective, from the practical point of view with regard to disciplinary content distribution in graduation courses, professors of each graduation course should discuss and decide whether pain-related subjects should be discussed during specific disciplines or should be offered by means of a separate discipline where contents are detailed and deeply presented and discussed with a professor specialist in this area.

It is important to stress that, today, good health professionals should master theoretical and clinical information as well as being updated with scientific evidences to base their practice, understanding how and when to use this evidence associated to technical experience and patient's preference. Evidence-based practice relates to systematic decision making process, where research results are evaluated and used to direct clinical practice<sup>40,41</sup>. So, it is advisable that professors encourage and be active in the evidence-based practice teaching-learning process, which should encompass different professional action aspects, from functional evaluation to therapeutic planning and subsequent patient's evolution follow-up.

Evidence-based practice does not determine types of evaluation or intervention procedures to be used by professionals, but helps them in selecting the best evaluation and treatment method to be used in a certain population with a given clinical condition and in organizing different information sources to justify clinical decision-making<sup>42</sup>.

It is important to stress ongoing education investments to update a clinical problem or dysfunction, be it by formal means (specializations, course, congresses, conferences) or more infor-

mally (in meetings with groups or professionals to discuss literature or case reports, for example). In addition, ongoing update of information through the reading of scientific articles, since ongoing learning is critical for the clinical practice.

## CONCLUSION

With this study, SBED's Committee of Physiotherapists hopes having contributed for an objective and updated direction on major aspects of the study of pain, to help and guide in a standardized and universal way, education on pain in Brazilian Physiotherapy graduation courses.

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