Pain curricular guidelines for Psychologists in Brazil

Diretrizes para o currículo em dor para Psicólogos no Brasil

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ABSTRACT

BACKGROUND AND OBJECTIVES: It is widely recognized that pain is undertreated, largely determined by the minimal academic training on the subject. This article aims to propose and present curricular guidelines in pain for undergraduate and graduate psychologists in Brazil.

CONTENTS: From an extensive literature review about education and pain, and based on national and international guidelines, curricular guidelines that contemplate the psychologist's education have been developed. The skills and competencies addressed in the training of the psychologist should contemplate their multifactorial nature, the importance of multidimensional evaluation, theoretical and technical models for interventions and management of the painful condition and aspects related to research and ethical aspects.

CONCLUSION: The contents proposed in the pain curriculum for psychologists can and should be integrated considering the regional characteristics and demands of the educational institutions and the availability of qualified professionals to teach and can be applied both to undergraduate and graduate courses. It is believed that having curricular guidelines to teach this subject not only broadens the psychologist's understanding of the health-disease process, but also increases their professional possibilities to perform their roles in multi, inter and transdisciplinary healthcare levels.

Keywords: Curricular guidelines, Curriculum, Education, Pain, Psychology.

RESUMO

JUSTIFICATIVA E OBJETIVOS: É amplamente reconhecido que há subtratamento da dor, em grande medida determinado pela reduzida formação acadêmica e profissional sobre o tema. O presente artigo visou propor e apresentar diretrizes curriculares em dor para psicólogos em nível de graduação e pós-graduação no Brasil.

CONTEÚDO: A partir de extensa revisão de literatura sobre o tema educação e dor, e baseados em diretrizes nacionais e internacionais, foram desenvolvidas diretrizes curriculares que contemplam a formação do psicólogo. As habilidades e competências abordadas na formação do psicólogo devem contemplar a sua natureza multifatorial, importância da avaliação multidimensional, modelos teóricos e técnicas para as intervenções e manejo da condição dolorosa e os aspectos referentes à pesquisa e aspectos éticos.

CONCLUSÃO: Os conteúdos propostos no currículo de dor para psicólogos podem e devem ser integrados considerando-se as características e demandas regionais, das instituições de ensino e a disponibilidade de profissionais habilitados para ministrá-lo, podendo ser aplicado tanto aos cursos de graduação quanto os de pós-graduação. Entende-se que o ensino desse tema a partir dessas diretrizes curriculares, não só amplia a compreensão do psicólogo sobre o processo de saúde-doença, como aumenta suas possiblidades de atuação profissional em diversos níveis de atenção à saúde de forma multi, inter e transdisciplinar.

Descritores: Currículo, Diretrizes curriculares, Dor, Educação, Psicologia.

INTRODUCTION

Psychology as a science and profession, besides having several areas of activity, presents different theoretical models about certain phenomena, including those that are opposed.

It is important to recognize that in psychology the dominant theoretical models of health until the mid-1980s were strongly based on mentalist psychology, influenced by the Cartesian assumptions that contemplate in their pillars the body/soul dichotomy (res cogitans - res extensa)[1,2]. These models propose the understanding of the body in a way analogous to the machine, in which the functioning of the components or organs determines the final product. Alterations of external origin in a given structure or organ (e.g., bacteria, viruses, accidents) or due to abnormalities of the organ determine shifts in its function. The treatments based on the perspective in question consist in identifying the cause of the dysfunction and correcting it, eliminating the pathogenic agent, and/or alleviating its symptoms. It is a dualistic and reductionist model,

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the body/mind split is total, and the subject understood as the patient is nothing more than the host of the pathology or disorder. However, the evolution of the biomedical model of Cartesian nature when compared with previous explanatory models, such as the magical representations of primitive peoples up to the 2nd century, where health and disease were mediated by supernatural forces, is evidenced. For Sevalho[3] and Scliar[4], the history of representations of health and disease was always based on the relationship between the bodies of men and the environment that surrounds them in their various dimensions. Under the present perspective, the environment must be understood in its social and historical context, which is determinant in the construction of overlapping beliefs, values, and health-disease representations that contributed to the development of health practices.

The biomedical model seems to result in part from the evolution of paradigms proposed by Galen (2nd century), the contributions of Greco-Roman medicine and Arabic medicine, which transmitted some of these concepts to the Middle Ages[3]. On the other hand, the biomedical model in force since the 16th century gained strength after the Industrial Revolution. Its assumptions were drawn from several conceptions, but the most important was the one that opposed the earlier coming from the conception of the movement of social medicine of the 19th century, which stated that the health-disease process was determined by the social organization of production. For this, the biomedical model rescued old discoveries as the microscope, for example, and proposed to modify the dissociation between the biological and the social. There was until that time the hyper valuation of the biological, and now unicausality logic of the health-disease process has been created. On the other hand, the biomedical model undeniably left behind a legacy of positive heritages, such as technological and therapeutic advances (e.g. microscope, isolation of bacilli and viruses, isolation of chemical substances) and allowed the treatment of several epidemics and development of public health measures (e.g. basic sanitation measures and treatment of specific diseases)[2,3].

Although the biomedical model has been effective for the understanding and treatment of several acute diseases, some central features may be challenged as a scientific paradigm. It presents a dualistic conception, with a materialist and reductionist orientation, as well as a lack of satisfactory explanation for the etiology or development of several diseases by denying the social determination involved in the health-disease process, especially the chronic ones, a central problem in the health sphere from the mid-20th century[2]. In addition, excessive technicality and biomedical-oriented clinical practice have contributed to the development of the impersonal character of the therapeutic relationship and disqualification or inattention to the subjective experience of the patient[1,5], aspects that significantly interfere with the patient's painful experience and have important implications.

On the other hand, in the mentalist model, the concept of conversion and the contributions of the psychosomatics may mark a moment of psychology in the understanding of the psychic etiology of diseases. In the imaginary of most psychologists, there are still remnants of this semiological model that seeks the psychic etiology of organic diseases. From the mid-1980s these theoretical models of eminently clinical orientation began to be challenged and lost their hegemony. Another important theoretical moment of the conceptual health models is marked by the development of the biopsychosocial model proposed by Engel[6] that emphasized the dynamic relationship between biological, psychological and social factors in the understanding of the health-disease binomial. Among the main critiques of Engel[5,6] and other authors[1,7] to the biomedical model, it can be highlighted the criticism of the understanding of the disease based on the causality model. The fact that the presence of a biological disorder does not always clarify the meaning of the symptoms presented by the patient. The little importance attributed to the psychological variables considered by the authors as or more important than biological variables in determining the susceptibility, severity, and course of a disease. The fact that according to the biomedical model, the role assumed by the patient is little or nothing related to the pathological agent or biological disorder "causer" of the disease; the existence of evidence that treatment success is influenced by psychosocial aspects (e.g., placebo effect) and that the doctor-patient relationship affects clinical outcomes (e.g., adherence). The critics and assumptions of the biopsychosocial model opposed the objectivity and exemption of the observer in the understanding of the phenomenon, the mind-body reductionism, and dualism, dogmas proposed by the biomedical model.

Concomitantly with the movement of conceptual paradigm shifts in health started in the mid1970s, Health Psychology begins to develop its identity as an area of activity. In the late 1970s, the American Psychological Association created the Health Psychology Division, which initially had four objectives: to study the causes and origins of certain diseases scientifically, to promote health, to prevent and treat diseases, promote public policies[7]. Moreover, since the last two decades of the twentieth century, there has been a greater insertion of psychologists in the health area, particularly in hospital institutions[8]. Thus, the 1980s can be characterized as the frame of the insertion of the psychologist in the area of health. Therefore, it would be natural that over the years a redefinition of the theoretical models, an object of study, objectives, practices, and places of attention.

Health psychology can be defined as the application of psychological knowledge and techniques to health, diseases and health care[9]. Matarazzo[10] defines health psychology as "... the set of scientific, educational and professional contributions that the different psychological disciplines make to the promotion and maintenance of health, to the prevention and treatment of the disease, to the identification of etiological correlates and health diagnoses, disease and related dysfunctions, improvement of the health system and the formation of a health policy".

Regarding the objectives, health psychology practices aim to contribute to the improvement of psychological well-being and quality of life, as well as contribute to the reduction of hospital admissions, optimize the use of drugs and the adequacy of the search for services, care and health resources by users[11].

In addition to the aspects already described, some authors emphasize the importance of distinguishing the object of study of health psychology. For Teixeira[12], the object of study of health psychology is the understanding of how biological, behavioral and social factors influence health and disease. Other authors point out the

construction of knowledge and practices directed to the social production of health as the object of the study and intervention[13-15].
Starting from the idea described, it is necessary to initially contextualize the area of action in pain, as a subspecialty of the psychologist's performance, inserted in the field of health psychology.
It should also be pointed out that neurosciences have also contributed greatly to the production of evidence that has broadened the understanding of the interactions between physiological, behavioral, cognitive, emotional and illness aspects. These advances include the discovery that the brain has an active role in the development of the painful condition, be it acute or chronic, filtering, selecting and modulating the determinant inputs[16]. Such advances and discoveries have led to other relevant advances, among them the consideration of the affective-motivational and cognitive-evaluative dimensions as fundamental aspects of the pain experience, as important as the sensory-discriminative aspect[17]. Finally, the notion that the pain experience is formed from the complex interaction of different brain areas related to factors such as sensations, emotions, memories, and thoughts, among some aspects of the psychological sphere[18].
Having said it, it is possible to delimit common theoretical frameworks of Health Psychology shared by the Psychology of Pain that in terms of theoretical models has quite solid bases. And, as far as the understanding of the participation of psychological aspects in the health-disease process is concerned, the production of knowledge is also very consistent. In terms of evidence of the efficacy of psychological interventions, there are also significant results[16,17] published in scientific circles of excellence.
However, the applicability of this knowledge is not contemplated in the training of the psychologist during his or her graduation, as has also been occurring in other areas of practice[18].
Jensen and Turk[17] argue that the topic of pain should be part of the curriculum in the training of the psychology professional, not only because of the seminal contributions made by psychologists to the current understanding of this important public health problem, but also because of the importance of identifying the instances of primary care that could benefit the users of the health system through preventive interventions that have already demonstrated effectiveness in reducing or alleviating it, as well as its impact on psychological and physical functioning. Based on these assumptions, the cited authors establish some guidelines and propose suggestions for future developments in research and clinical practice, since they credit the relevant role of psychology in improving and understanding the pain condition and its treatment. The authors further provide a model of how psychologists exert significant influence in different fields of action because different theoretical models and approaches have been developed and put into practice for the understanding and treatment of pain that are useful for psychologists working in other areas of action. Thus, the authors think that chronic pain is an important area of study that offers information on translational research for "all" psychologists.
Considering the high global prevalence of pain and that there is currently a wealth of solid knowledge about psychology on the topic; that there is solid evidence on the participation of psychological factors in both their chronification and the resulting incapacity and suffering interfering in the outcome of medical interventions; that there is a lack of multidisciplinary interventions; that there is a shortage in the training of psychologists about the problem and that there is a need to propose curricular guidelines that can guide their practice; there is sufficient reason for institutions such as the Brazilian Association of Psychology Education (ABEP), the Council system - Federal Council and Regional Councils of Psychology, Educational Institutions, coordinators of psychology undergraduate courses, teachers and students, and others involved with the topic of this article understand the relevance of the minimum training in pain that seems to be of extreme interest both for the category of psychologists and for the other professional categories of health in the national panorama of the pain problem.
This article does not pretend to speak deeply about the different theoretical models of health in psychology or health concepts, but to highlight some theoretical and historical assumptions aimed at establishing curricular guidelines for the formation of the psychologist in the area of pain.
The intention to propose the curriculum in pain for psychologists was to stimulate the approach of the topic in the undergraduate and graduate degrees, providing subsidies for the integration of the topic into curriculum frameworks, as well as to stimulate reflections on the psychologist's training and praxis in the area.

CONTENTS

With the purpose of proposing the curriculum in pain for psychologists, a committee was formed composed of members of the Brazilian Society for the Study of Pain (SBED), members of the Pain and Mental Health Education Committees, Board Members and specialists of remarkable knowledge in the area. The commission consulted the specialized literature through database research, identifying several relevant articles on the topic[18-21]. Some IASP guidelines also served as a guiding medium[22] for the achievement of the task, as well as aspects described congruent with the Core Curriculum for Professional Education in Pain[19] and with the IASP Core Curriculum in Pain for Psychologists[23].
Since pain is a stressful experience associated with possible tissue damage with sensory, emotional, cognitive and social components[24] and despite the conceptual evolution of this phenomenon, scientific development and the expansion of clinical pain care, there are still enormous challenges for the adequate treatment of pain.
To describe the advances made in the area succinctly, Sessle[20] described some central aspects to be addressed:
• Recognition of the multidimensionality of pain and the importance of biopsychosocial factors in the expression and behavior of pain;
• Identification of peripheral and central nociceptive processes;
• Discovery of various endogenous neurochemical and intrinsic pathways in the brain and their nociceptor influences, transmission and behavior;
• Development of concepts and insights about the neuroplasticity of pain processing that can lead to chronification;
• Advances in the field of brain imaging and molecular biology and their applicability relevant to the field of study;
• Improvements in surgical, pharmacological, and behavioral procedures in pain management, where such improvements include developing drug delivery systems, offering a broader range

of analgesics and other drugs for patient management, use of interventional procedures, physical rehabilitation and cognitive-behavioral therapy, among some.

These aspects would depend to a great extent on the reorganization of the Unified Health System (SUS) to treat pain more adequately since, in private clinics in some services, this occurs more frequently when compared to public services, especially when considered the primary and medium complexity levels of health care.

The synthesis of the mentioned aspects allows glimpsing the evolution of the available resources and the great variety of procedures or resources developed in the last 30 years for the understanding and treatment of pain.

However, in two other major areas still need further development: pain education for professionals working with patients with pain such as education in pain for patients themselves. The area dedicated to the development of public policies that includes adequate budgets for research subsidies and regulates the practices of health promotion and appropriate treatment directed to pain relief[18,20,23,25] still needs to be further developed due to the lack of information on the cost-effectiveness of adopting psychological interventions[31].

Pain education for health professionals at all levels has been repeatedly identified as an important step towards shifting ineffective pain management practice.

Given this context, this curriculum in pain for psychologists based on the core curriculum of IASP[23] was aimed at:

1. Provide students and psychology professionals with an overview of the multidimensional nature of pain based on clinical aspects and basic sciences;
2. Introduce strategies for the assessment and measurement of the various dimensions of pain for use in clinical practice and research;
3. Provide support for understanding the contribution of psychosocial aspects to pain, physical incapacity, functional capacity, and psychic suffering;
4. Understand the role of evidence-based therapies and psychological treatments;
5. Contribute to the development of multidisciplinary, interdisciplinary or transdisciplinary interventions in the treatment of patients with pain.

These objectives were drawn from the principle that pain treatment requires an integrated biological, psychological, behavioral and social approach, based on the understanding of the participation of psychological and social factors, as well as the central and peripheral nervous system in mediating and modulating the pain experience[23].

To achieve the objectives, students and professionals should familiarize themselves with theoretical and intervention models based on empirical evidence, considering their epistemological aspects and social determinants, so that the provisional and fleeting nature of the concept of pain can be considered, bearing in mind that knowledge is constantly being built. Teachers and opinion makers in the area should be encouraged to adopt a critical assessment perspective for decision-making in reviewing the scientific evidence, available resources, benefits and limitations of interventions[26].

CURRICULAR CONTENTS

In proposing the contents to be addressed in a curriculum in pain for psychologists faces the challenge of contemplating the various biopsychosocial aspects of pain and its feasibility. In this sense, in a way, instead of an ideal and extensive curriculum, the purpose was to delineate minimum curricular guidelines, which do not fully satisfy the dense training that a specialist psychologist should guide in the context of the complexity of pain.

To better understand these issues, or to have a glimpse in their breadth, curriculum in pain for psychologists proposed by the IASP[23] will be presented first, citing only its axes and topics and some subtopics. Subsequently, the curriculum guidelines in pain for Brazilian psychologists that seem more appropriate at the moment will be presented.

The Multidimensional Nature of Pain axis should contemplate five topics: A. Introduction and conceptual aspects of pain, B. Neurophysiology and mechanisms of pain; C. Theories and models of pain (considering its implications for treatment); D. Ethical aspects; E. Assessment of interventions and research.

The Pain Assessment and Measurement axis should contemplate the following aspects: A. Experimental pain; B. Clinical assessment of pain; C. Assessment of dimensions associated with pain; D. Epidemiological assessment; E. Psychological and behavioral assessment of the individual with chronic pain or pain associated with cancer; F. Assessment of other psychological aspects and mental disorders; G. Assessment of treatment results.

The pain management axis should address: A. Motivational aspects; B. Early intervention; C. Operant treatment; D. Cognitive-behavioral treatment; E. Relaxation and Biofeedback; F. Hypnosis; G. Psychological treatment of childhood pain; H. Family therapy for chronic pain; I. Interdisciplinary interventions.

The axis relating to clinical conditions should contemplate aspects such as A. Classification according to the criteria of the Statistical Manual of Mental Disorders (DSM), International Classification of Diseases (ICD) and IASP; and B. Comorbidities.

All the contents described in the IASP[23] Core Curriculum have been briefly described, considering only the central topics without describing the subtopics addressed.

Based on these assumptions and contents outlined by the IASP[23] and other previously mentioned topics, including national productions in this area[27-32], the proposal of a minimum curriculum on pain for Brazilian psychologists proposes a discipline on biopsychosocial aspects of pain, with a minimum workload of 30 hours, in order to prepare the psychology students and professionals for a better understanding of the painful phenomenon in their biopsychosocial aspects and to act effectively in a multidisciplinary team or individually in interface with the other health areas considering the human subjectivity.

The proposed curriculum should be supported by a consistent basis of scientific literature that addresses the following thematic axes and contents:

I. Multidimensional nature of pain;
II. Multidimensional pain assessment;
III. Pain management and interventions;
IV. Research and ethical aspects.

Multidimensional nature of pain
The unit should contemplate the contents minimally:
a. Definition and classification of pain;
b. Epidemiology of pain;
c. Nociceptive and neuropathic mechanisms of pain;
d. Theories and models of pain;
e. The biopsychosocial perspective of pain.

Multidimensional pain assessment
The aspects addressed in this unit should address the following topics:
a. Assessment of the sensorial dimension of pain;
b. Assessment of cognitive and neuropsychological aspects of pain;
c. Assessment of emotions;
d. Assessment of mental disorders;
e. Assessment of coping strategies;
f. Assessment of quality of life and related measures;
g. Assessment of family and occupational aspects;
h. Elaboration of psychological documents.

Pain management and interventions
The contents addressed in this axis should contemplate:
a. Clinical approaches: contributions of the various evidence-based psychological approaches in the treatment of pain;
b. Interdisciplinary interventions and adherence;
c. Education of the patient with pain, relaxation techniques, meditation;
d. Palliative care;
e. Health promotion;
f. Spirituality.

Research and ethical aspects
The ethical aspects should be part of this thematic axis:
a. Rights of patients with pain;
b. Racial, ethnic and sociodemographic disparities;
c. Legal issues;
d. Ethical principles of research;
e. Research design.
The curriculum design based on these guidelines should include evidence-based topics and sub-topics, regional needs and the availability of resources and well-trained professionals.

DISCUSSION

It was decided to elaborate a shorter version of the curriculum in pain for psychologists, considering that the curriculum proposal for IASP psychologists is quite extensive and would require a great deal of time, a large number of professionals, to approach the proposed content, being little feasible before the Brazilian reality.
The proposal to build a minimum curriculum for psychologists aims to stimulate the teaching of pain and delineate its parameters in undergraduate and graduate courses. It is understood that the contents of the curriculum will be adapted according to the human resources available in the region in which it is applied and whose workload for the topic can and should be disseminated through various means, preferably supported by an institution that houses consistent knowledge to do so. The contents described in the curriculum should also be inserted in the Pain Leagues. The participation of psychologists in their professional body, stimulating the involvement of Psychology students and professionals in their organization, and according to the IASP, pain clinic offers effective care. The teams should be composed of at least 4 professionals specialized in pain treatment: a doctor, a nurse, a physical therapist and a mental health professional, or psychologist or psychiatrist, provided they have adequate training in non-pharmacological and psychotherapeutic treatments.
The contents addressed in the curriculum in pain for psychologists, as well as for other professionals, should take into account the following five principles[23]: 1) Every health professional has an obligation to be empathic, accessible and work with patients and family members in pain management; 2) Professional learning opportunities provide students with the understanding and appreciation of the experience of other professionals besides their own; 3) Comprehensive assessment and management of pain are multidimensional (i.e., sensory, emotional, cognitive, developmental, behavioral, spiritual, cultural) and requires the collaboration of various health professionals; 4) Effective results in the pain management occur when health professionals work with patients, relatives, community and health care providers (such as insurers and medical covenants); 5) Interprofessional education in pain is more successful when it reflects real-world practices and is integrated at the beginning of the educational experience.
Once there are qualified professionals, broader educational actions can be structured, expanding the range of training repertoires and not restricted to professional training, but also active in other sectors, subsidizing partners and users of health systems. These actions may include addressing the following aspects[23]:
• Inform the public, government/policymakers, the media, communicate with the intent to leverage knowledge about the issue by disseminating possibilities for treatments aimed at preventing chronification;
• Synthesize new information related to pain for the general public, as well as health professionals and other public and private spheres of action;
• Develop educational materials on pain for patients, health professionals, governments/policymakers aiming at opinion-making about pain prevention and intervention;
• Collaborate and subsidize public and private entities interested in initiatives that foster the development and dissemination of scientific psychological information;
• Inform and support the mobilization of patient advocacy groups as well as support initiatives of organized patient groups for support.

CONCLUSION

The curricular proposal for pain training of the psychology professional and student can provide the development of skills and competencies to perform diagnoses that contemplate the various dimensions of the painful experience, allowing the planning and the accomplishment of interdisciplinary psychological interventions whenever possible.

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