

# Teaching pain psychology and neuropsychology: what do medical trainees want to learn?

## Abstract

Pain psychology and neuropsychology education helps medical trainees learn how to better treat pain. There is no existing standard education curriculum for pain psychology and neuropsychology medical education. This makes it challenging for educators to teach the most clinically relevant topics to medical trainees. To take the first step in advancing our understanding of high-yield education topics for medical trainees, this article reports on the author's view of high yield education topics to teach as a result of two focus groups and teaching experience feedback, aimed at identifying clinically relevant education topics. The focus groups and feedback led to the development of two lists: trainee-instructor generated topics and trainee-generated topics. Trainees believe that these topics represent the most need-to-know information for their day-to-day clinical practice. The implementation of high-yield topics appeared to enhance class engagement and participation. Educators may consider implementing focus groups and the two lists of topics as a starting point to develop pain psychology and neuropsychology education curriculum for medical trainees.

Volume 6 Issue 7 - 2016

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**Received:** November 28, 2016 | **Published:** December 29, 2016

## Introduction

Psychology is a core part of medical education,<sup>1</sup> particularly in pain medicine education. Pain psychology and neuropsychology services play a vital role in the treatment of chronic pain.<sup>2,3</sup> The lack of formal education and training of the psychological and cognitive aspects of pain has been suggested to be one of the reasons pain is under treated by medical professionals.<sup>4,5</sup> Providing clinically relevant pain psychology and neuropsychology education for medical trainees (e.g., medical students, nursing students, psychiatry residents, pain medicine fellows, etc.) could improve their clinical competency to better treat pain.

However, there are a few fundamental questions that need to be answered when teaching pain medicine trainees. What topics do trainees want to learn from these specialties? What topics are most relevant and clinically practical for future pain medicine practitioners? What can educators draw from the answers to these questions in order to better meet trainee educational needs?

The author was faced with these questions in his own teaching experience as some trainees had reported multiple difficulties translating the psychology curriculum into their daily practice. When this issue was closely examined, it appeared that the topics did not directly address their clinical training needs. A review of the literature did not find any standard curriculum or topic list available for educators who wish to teach pain psychology and neuropsychology to medical trainees. The exception to the aforementioned is one review paper by the author and his colleagues who describe high yield content areas and teaching psychotherapy framework to behavioral medicine professionals and trainees, namely the Behavioral Medicine Y-Model.<sup>6</sup>

What follows is the author's reflection, opinion, and report on topic lists that were developed as a result of two focus groups held with pain medicine trainees (e.g., pain fellows, anesthesia residents, nursing, fourth year medical students, and physician assistant students) and a result of further refinement with student feedback and teaching experience. The goals of the focus groups were to empower trainees to steer the direction of pain psychology and neuropsychology curriculum and to better understand clinical training needs. The author conducted the focus groups in three steps:

1. Trainees broadly discussed clinical and educational needs pertaining to mental health and pain;
2. The author facilitated the discussion to narrow down a list of trainee-instructor generated education topics; and
3. In a subsequent focus group, trainees were given the trainee-instructor generated topics and asked to discuss and narrow down the most interesting and clinically relevant topics, which resulted in a list of trainee generated education topics. The topic lists were further refined with student feedback and teaching experience.

## What do medical trainees want to learn?

The first focus group revealed multiple learning interests that centered mainly around practical topics (e.g., what is psychotherapy, assessment of depression etc.) with a small amount of request for specialized topics (e.g., neurocognitive disorders). These topics included: the role of psychology and the referral process; psychological treatment modality; effects of comorbid psychiatric, substance use, and neurocognitive disorders on pain management; assessment methods; culture and pain; brain function and pain. To better assist educators in addressing these topics, the author phrased the topics in a form of a question, which helps trainees to get a quick answer in a time limited environment. Table 1 described the trainee-instructor generated education topics.

Trainees found pain psychology and neuropsychology education essential to their training and clinical practice. Tables 1 & 2 show that trainees wish to learn the fundamental aspects of such specialties, rather than to learn advanced topics. Another point taken from the focus groups is that trainees want to learn diverse topics from pain psychology and neuropsychology (e.g., Table 2). For example, trainees were very interested in learning about personality disorders, addiction, psychological assessment of spinal cord stimulator candidates, and relational/environmental influences on pain.

Interestingly, trainees also expressed an interest in learning different teaching approaches. For instance, some reported a desire to learn in an experiential fashion (e.g., attend a psychotherapy session or do an intervention in class) while others requested to learn via watching a video in class and discussing topics (e.g., seeing a video of a therapist perform cognitive-behavioral therapy [CBT]). Of note, another strong interest was to learn how to use assessment tools in a time-limited manner (e.g., assess in 15 minutes).

**Table 1** Trainee-Instructor Generated Pain Psychology and Neuropsychology Topics

<b>Pain Psychology Topics</b>
What is the role of a pain psychologist
When to refer to a pain psychologist
When to refer for psychotherapy
Who responds well to psychotherapy
What is Cognitive Behavioral Therapy and how can it be useful in my practice
What is Motivational Interviewing and how can it be useful in my practice
What are other psychotherapy modalities (e.g., Psychodynamic, Dialectical Behavioral Therapy) that can be useful in my practice
What is Transference & Counter Transference and how can I use this in my practice
What is Pain Coping Skills Training
How does biofeedback help musculoskeletal and headache conditions
What is mindfulness and how can I use it in my practice
What do I when there is no mental health resource
What is behavioral preparation of a spinal cord candidate
How to deal with difficult patients
How to communication effectively with patients
How can eating behavior impact pain management
What are the current pain theories
How does culture impact pain management
<b>Assessment</b>
How to assessment...
...Depression and Anxiety
...PTSD and OCD
...Personality Disorders (aka axis II conditions)
...Substance Use Disorders
...Opioid Use Disorders
...Somatic Symptom Disorders
How to conduct a clinical psychiatric interview and a mental status exam
Assessment of a spinal cord candidate
<b>Neuropsychology Topics</b>
Brain imaging of pain pathways
What are neurocognitive disorders
What are the different types of dementias
How to assess for traumatic brain injury and post-concussive syndrome
How to assess for dementia
How to assess of neurocognitive disorders
What are memory disorders and how do they affect pain perception and management
What is neuropsychological testing
When to refer for neuropsychological testing
What are tests of malingering and effort

**Table 2** Trainee-Generated Pain Psychology and Neuropsychology Topics

<b>Most Clinically Relevant and Interesting Topics</b>
Would like to see a psychotherapy session
What are 3-4 basic tools to assess and use with patients
When is it indicated to refer for psychotherapy
Who is a good candidate for psychological services
How to learning different interventions such as mindfulness, CBT, DBT, and pain coping skills, motivational interviewing
What can we do when there is no mental health resources
Would like to learn more about addiction medicine, substance use disorders, and opioid management
Would like more videos and cases
How to deal with a difficult patient
How to conduct a mental health assessment
What is psychological and neuropsychological testing
How to assess a spinal cord stimulator candidate
What are axis II disorders
Understand mental health terms (e.g., affect restricted)
How to psychologically assess in 15 minutes

After the focus groups and implementation of the topic in table 1 and 2, trainees appeared more engaged in lectures. They also had more follow up questions about how the topics related to their current cases, which may suggest that trainees are converting the psychology knowledge of topics into clinical practice. Also, the focus group and topic lists appeared to match just what they needed to know without over or under estimating their prior knowledge base on psychology topics.

## Conclusion

Medical trainees are very interested in pain psychology and neuropsychology education curriculum and find these topics to be a key component in their clinical training. They appear to appreciate the unique contribution of pain psychology and neuropsychology assessment and treatment modalities to the treatment of pain. Having a focus group and a tailored topic lists appeared to have increased topic interest and the translation of knowledge of topics to clinical practice.

The author sought to identify the topics trainees wanted to learn and the topics that are most relevant and clinically practical in order to help educators meet trainee's educational needs. The focus groups resulted in a list of clinically relevant interest-driven topics including fundamental clinical syndromes, assessment, treatment, and defining specialty and referral criteria. Trainees also discussed a desire to have multimodal learning/ teaching styles (e.g., experiential learning, use of media/video).

This report seeks to help educators take the first step in integrating pain psychology and neuropsychology into their pain medicine curriculum and maintain trainee motivation and interest. Educators can use focus groups as well as the trainee-instructor generated and trainee-generated education topics as building blocks in creating a pain specialty psychology curriculum.

## Acknowledgments

University of California, Davis Division of Pain Medicine.

## Conflicts of interest

Author declares there are no conflicts of interest.

## Funding

None.

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