

# Feature Article

## The journey of pain education as a new graduate

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*"[I learned] that the most important person to affect change is myself".*

- A participant in the neuroscience of pain education seminar I present called "Overcome Pain, Live Well Again".

I graduated in October of 2012 with my Master's in Physiotherapy from Dalhousie University, and I have been providing this seminar biweekly since January 2013. I want to clarify that I am not a scientist or an expert in chronic pain, nor was I a top graduate from my Master's program. I was simply a physiotherapy intern who saw a need for this kind of education in the Northern Alberta community of Slave Lake, and set out to find a way to make it happen. Through writing this article I want to tell the story about how I started giving this presentation, and more importantly the impact it has had on the community and the way that I practice. For myself as a new grad, pain science is not just "another tool in the toolbox", but essential to my practice.



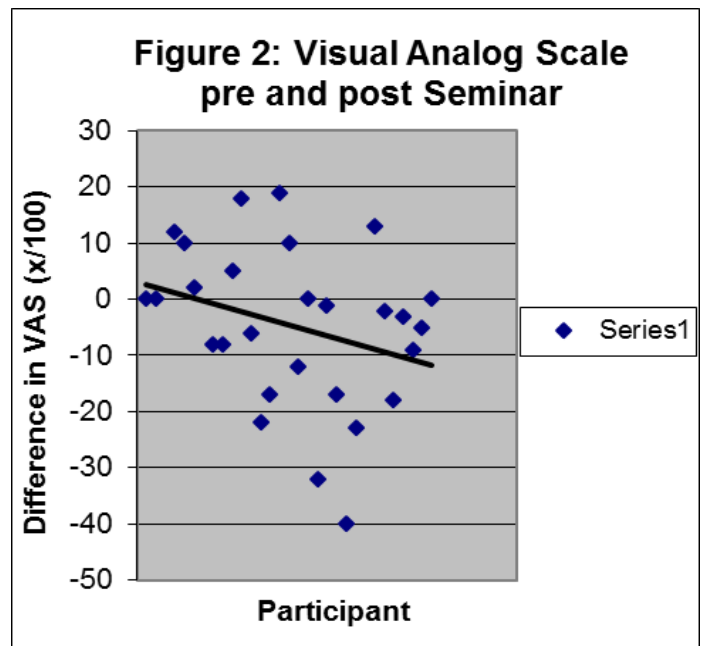
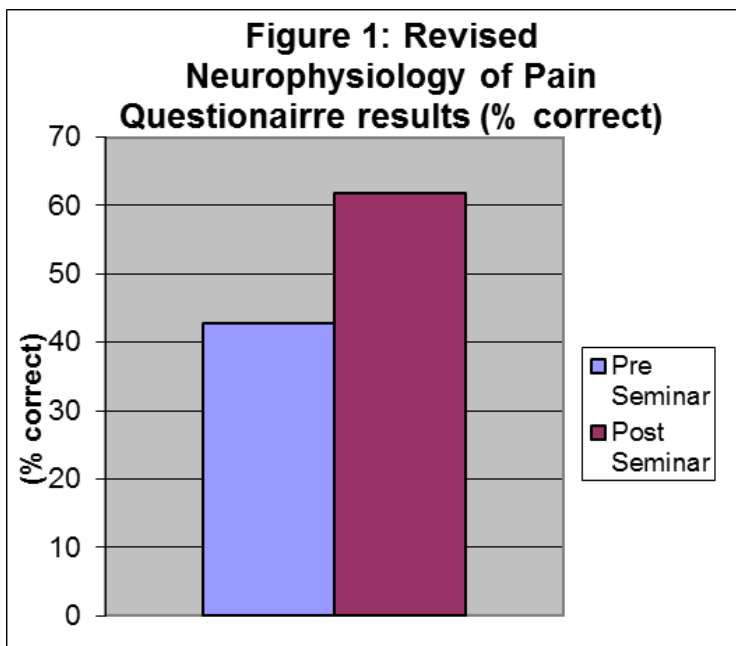
In October 2012, two classmates and I from Dalhousie accepted Physiotherapy job offers and travelled across the country to Slave Lake. We started working in a town of 6,000 people where prior to us, the only way to get services was through two contract physiotherapists. The previous Physiotherapists did the best they could, but there was a waitlist of over 200 people. After taking a closer look at the waitlist, we noticed over half the people had the unfortunate label of "chronic" pain. This meant that as new grads most of our caseload consisted of individuals that have been in pain for months to years. In addition to this, our mentor was a five hour drive away, so the majority of the time it was just the three of us scared new grads and the therapy assistants.

I received support from our Manager to start looking for a program that could help these people while they were waiting to come into the clinic. I decided to approach this situation using a Plan, Do, Study, Act (PDSA) cycle (Langley et al., 2009). This approach can be beneficial within the health care system to reduce risk of failure and resistance to the idea. It can also be a great tool for learning by allowing breakdown of ideas that work and those that do not.

The first stage is to "Plan", so I researched the effects of pain education (Louw et al., 2011), and how to explain this information to patients (Nijs et al., 2011). I was excited to find that there was not just randomized controlled trials, but Louw et al. (2011) performed a systematic review and meta-analysis on the use of pain education. This research provided me with valuable information on the benefits of pain neurophysiology education, but I still did not have a good idea of how to provide a program in the community. I remembered doing a private practice placement in Saskatoon as a student. One of the physiotherapists gave a two and a half hour pain education seminar that I really enjoyed. The program made use of lots of analogies and patient experiences that made it easy to relate to. Afterwards, the physiotherapist talked me through the benefits of giving the seminar, and discussed how it has helped her clinic as a whole. I contacted my old clinical instructor, who forwarded me to the person giving the presentation. I found out that the seminar was called "Overcome Pain, Live Well Again". Neil Pearson had developed this based on the neuroscience he learned from experts such as Lorimer Moseley and David Butler, and his experiences educating and treating people in pain. I contacted Neil and within another week, for a very reasonable fee, I had purchased the rights for his presentation and patient education resources. My manager supported the purchase and I was reimbursed through Alberta Health Services.

I think it's important to draw attention to the translation of knowledge that occurred across Canada in order for this to get going. It shows that when we work together as a profession tasks that might seem difficult, like starting a pain education program from scratch as a new grad, becomes manageable. The conversations and opportunities I had as a student with my clinical instructor and his colleagues had a huge impact on my current practice.

After studying the presentation and associated literature, I started promoting the seminar to medical clinics, other health care workers at the hospital and appropriate patients in our clinic. I was excited and nervous to start a program where I had to talk for over two hours about information that I had not used clinically. I knew the research supported pain education, and I had heard second hand stories about the people who have been helped. I also knew that I was starting a journey down an unfamiliar path. It was now time to implement the "Do" part of the PDSA cycle (Langley et al., 2009), which involved a 3 month trial of the biweekly seminar. I presented the first seminar to a small group of health care workers and patients from our clinic. I was sweating and stuttering more than usual, but the information was well received. It only got easier from there. I was asked to give a presentation about the program at the Slave Lake Family Care Clinic open house to Alberta Health Services management and the public. I have not only had people with persistent pain attend, but their family and friends too. Other health care workers like nurse practitioners, massage therapists, physiotherapists, occupational therapists, therapy assistants, and mental health and addictions counsellors have attended with enthusiasm as well. I recently provided the seminar via Telehealth, video conferencing to 7 sites and almost 30 health care workers across Alberta and one site in New Brunswick. I have seen the power of this information in transforming pain. It is amazing how something as simple as some pain education, a deep breathing technique and gentle pain free range of motion can significantly impact an individual's life.



As you can tell, I am excited to have this knowledge and the ability to present it to my community. From here, I am going to talk about some of the advantages of having a regular pain neuroscience education seminar. The clearest benefits include the participants having an increased knowledge of their body and how pain develops, and this often results in less pain and greater participation in usual activities over time. Before and after each seminar the attendees fill out the Revised Neurophysiology of Pain Questionnaire (RNPQ) (Catley et al., 2012) and a Visual analog scale (VAS) for pain (Louw et al., 2011). After the first 3 months of seminars I implemented the "Study" portion of the PDSA cycle (Langley et al., 2009), completing an analysis of the data. The results of the RNPQ showed a significantly improved score of 43% to 62% ( $p < 0.001$ ) (See Figure 1). Considering the difficulty of the questionnaire and the wide range of education, age and background of the participants, I feel this is an important change. The VAS did not show significant changes, however there was a trend towards decreasing pain levels after the seminar (See Figure 2). The fact that I am giving a two and a half hour

lecture in uncomfortable chairs to people who have pain can explain why some individuals had the same or increased pain by the end. In the future, I would like to have the participants fill out the RNPQ and VAS at various intervals after attending the seminar. I think it's important to use outcome measures like these to monitor the effectiveness of the seminar over time. In addition to these outcome measures, I included an anonymous survey where participants could provide feedback on what they enjoyed or found beneficial and give any suggestions to improve the seminar. Overall I have received very positive feedback, with the majority of comments being discussed within this article.

The second advantage to offering the seminar to the public is having other health care workers attend. I try to make the seminar as interactive as possible, and having people who know more about the human body enriches the level of discussion. The views and examples given by a nurse who has had a total hip replacement and felt the associated pain can be very different than an oil field worker with a similar surgery. It helps me learn as a physiotherapist and gives the participants an opportunity to see the same pain in different ways. The seminar also puts everyone on a level playing field. We are taught in school about the importance of multidisciplinary practice and working together as a team to provide patient centered care. The interactions between the patients and health care workers who attend promotes a positive environment, and helps shape their views of the health care system.

Through this multidisciplinary environment, the seminar advocates for our profession. The best marketing is being valued by our patients and our coworkers. Many individuals attending the seminar in Slave Lake see physiotherapy as specific to rehabilitation after an injury. Others have even less knowledge about what physiotherapists do. Providing this seminar shows our goal is to help improve function and quality of life just as much as helping with the healing process in damaged tissue. It builds trust for our profession, and the more a patient trusts their physiotherapist the better their outcomes will be.

By having this seminar available within the community, people will have increased satisfaction with the care provided by the Physiotherapy department and the hospital. The seminar can be the first stop for people suffering from persistent pain. They can be referred by a doctor or a friend, or see the posters up and refer themselves. By having this resource within the community, it shows that we are making an effort to provide the right service, to the right people, at the right time. After they attend, if we see them in the clinic the same information is given to them from the other therapists and assistants. Since the patients now have a basic understanding of pain science, as a therapist I am able to have a one on one focused discussion that links the education specifically to their situation. This frees up time that can then be used for other types of treatment.

Linking all of this together, I feel that this seminar is helping to improve the patient's journey through the health care system. Providing this information to other health care workers will mean that a similar message will be given to the patient from multiple sources. The continuity of education from one practitioner to the next will increase the trust the patient has in the information he or she receives. Too often, we are faced with patients who get mixed messages and sometimes the physiotherapist is left putting it all together because of our ability to have more face time with them. The more an individual hears the same information, the more likely it is to motivate them to make the appropriate changes in their life.

Even though there has been a lot of positive feedback about the seminar, this experience has brought along a few challenges. Initially there wasn't much interest, which meant some sessions had only one or two people. This seminar takes me away from the clinical aspects of my job, and until the numbers went up I was unsure if this was an efficient use of my resources. Once numbers increased, we started having problems accommodating some individuals' needs. Persons' with sight, hearing or comprehension deficits, and those with English as their second language may have difficulty processing the information in a group setting. The seminar is also not appropriate for young children as they need the information presented in a different way. In some cases, we have arranged one-on-one sessions with these patients. Individuals who are acutely flared up may not be able to attend because they may be in too much pain to make it through the seminar. For those patients who are appropriate, access can be an issue. The Slave Lake Healthcare Centre services a large area and the seminar occurs every

second Monday morning. Patients who may be travelling in from distant communities, or who are working may find it difficult to attend. Taking these issues into consideration, I have found the benefits of the seminar have outweighed the limitations. The final stage of the PDSA cycle is to “Act” (Langley et al., 2009), which involves deciding if the initiative can be implemented and planning the next cycle. From what I discussed above, there is an observable benefit from having the seminar. I decided to continue the biweekly seminars and collecting information from the VAS, RNPQ, and surveys.

Initially, I mentioned how the knowledge and application of pain science is not only beneficial to the clinical practice of a new grad, but essential. I have had the privilege of having been a practicing physiotherapist and always having this knowledge. To be honest, I don't know how I would be able to effectively treat some of my patients without it. I feel that having discussions about pain education sparks positive interactions. The patients open up more about their history because it relates to the education, metaphors and analogies that I present in the seminar. In school we are taught basic subjective examination and some information on motivational interviewing, but it's difficult to make it flow. By attending the seminars, patients have some stories they can relate to and it makes it easier to have these discussions. This produces a better patient/physiotherapist relationship and more buy in from the patient.

There was little information in my Master's program regarding the neuroscience of pain and how to treat persistent pain. I remember a handful of lectures in the two year program other than the anatomy of the nervous system. The anatomy is just the first step to understanding pain. It's like studying everything on how a single tree grows and develops, and then being expected to take that information and be able to understand how an entire forest works. I thoroughly enjoyed the MPT program as a whole and I understand that we are training to be a “Jack of all trades, not a master of one”. However, I feel that pain science is not a specialty, but a foundation that all physiotherapists can build on. Since learning this information I have started to use evidence based techniques such as deep breathing and meditation with many of my patients to improve function. Despite the research supporting these techniques, we did not learn about their potential benefits in our curriculum. Many of us in my class took an optional weekend course titled “Evidence Based Diagnosis and Treatment of Musculoskeletal Pain and Mechanisms” provided by Mike Sangster. After that weekend my interest in the area of pain science began to grow and I felt that the information he presented should have been included in our curriculum. Now that I have seen the benefit of this education in practice, I believe in that statement even more. Almost every patient that comes into a physiotherapy clinic has pain. How are we as new grads supposed to help create long lasting effects if we don't understand how a person's environment, thoughts, beliefs, and actions affect their pain?

Now where do we go from here? For myself, I will continue to advocate that not only physiotherapists and their patients, but all health care workers and the general public have access to this important information. This may also help prevent the onset of persistent pain by giving healthcare providers the tools they need to identify yellow flags and give appropriate education. Providing patients with acute injuries pain education may help prepare them to make changes before it turns into a chronic issue. A long term effect of giving consistent pain education may include decreases in health care costs by shifting the focus to active treatments and self-management for persistent pain instead of passive treatments with only short-term effects.

One great way that I will be getting this information out there is by Telehealth, which is a way of video conferencing through Alberta Health Service sites. I presented a pilot seminar recently that was well received by the health care workers that attended. Even though I do not claim to be an expert in the field, I was able to answer questions regarding treatment ideas and where to look for more resources. I have been happily put into a position to help my colleagues in the north zone, past classmates, and other healthcare providers assess and treat their patients who have persistent pain. I am now working towards providing the seminar via Telehealth on a regular basis to another community in the North Zone. This is an exciting opportunity to help bring a cost-effective and beneficial program to a rural community.

Another step I feel we should take as a profession is advocating for more pain neuroscience education within professional degrees. I do not think there is enough education in this area for the MPT program. I have had the unique opportunity to have discussions with many different professionals with varying levels of experience, and all have said they did not learn pain education in this way during their degrees. This education is evidence based, straight forward to deliver, and it works! One reason that I wrote this article is to create some discussion on how to fit this education into a multidisciplinary, client focused program. What better way to do that then to go to the schools where people start their professional careers.

In advocating for this education, there needs to be more people to spread the knowledge and be willing to help students and young physiotherapists. Educational programs such as Neil Pearson's "Overcome Pain, Live Well Again" and courses such as Neuro Orthopaedic Institute's "Explain Pain" provide the skills necessary to jump right into the task of delivering pain education that would be otherwise daunting for new graduates. With that said, the availability of this type of information still needs to improve. Neil has been a great help with everything from creating advertisements to paving the way for me to write this article. My past clinical instructors were also instrumental in getting this program started. They were open to talk and network with me months after my placement had finished. I am using this article as a soap box to stand on to get more people active with our students. I have greatly appreciated all of the clinical instructors I had in my program and I know that throughout my career I will be taking students. I know there are a lot of great clinicians out there that think they don't have enough time, or that their caseloads aren't interesting enough to take a student. At Dalhousie there was a constant struggle to acquire student placements and it's not because there's a lack of physiotherapists around. How are we as a profession going to grow without providing support for the young physiotherapists? Who will be the next David Butler or Lorimer Moseley?

In order to grow as a profession we need to be creative and think outside the box. If you ask any of my close friends and family, they will tell you I am a guy who likes to learn new things. Every couple months, I put my mind into something new because I like creating something different and novel that makes me and the people around me happier. I learned how to paint because I wanted to be able to create something unique and different. I took dancing lessons to find out how to create movement with a purpose. After a couple months of watching online bongo tutorials, I learned how to create music. The last six months my "new thing" has been introducing pain education to people. Instead of creating a painting or a beat to a song, I'm creating an opportunity to improve an individual's quality of life. It has a deeper meaning than anything I've learned in the past, and also has the potential to have an effect on more people. This education is not something I'll put on the back burner in order to learn a new skill. I believe this is the groundwork in order to better myself as a physiotherapist and create positive changes in my patients.

In closing, I hope that the information I presented in this article makes you appreciate the knowledge you have and gets you excited to talk about it. I started off with an interest in how the brain works and a desire to help people, and by having a regular neuroscience of pain education seminar I am able to combine the best of both worlds. The seminar has allowed me to grow as a professional and work with a variety of health care workers. I feel like I've been advocating for our profession and helping to create a more consistent message about how pain really develops. I could not be writing this article today without the support of my past professors, clinical instructors, colleagues and my muse/fiancée. I implore you to not only use pain science in your practice, but to advocate for its inclusion in our education. The next generation of physiotherapists will thank you for it.

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