

The Brookbush Institute updates 'Pain Neuroscience Education (PNE) is Relatively Ineffective: Research Confirmed'

Is this the final nail in the coffin? Another peer-reviewed and published RCT demonstrates the ineffectiveness of Pain Neuroscience Education (PNE)

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EINPresswire.com/ -- - Excerpt from the Article: [Pain Neuroscience Education \(PNE\) is Relatively Ineffective: Research Confirmed](#)

- Additional Resources: [Pain Science](#)

- Additional Resources: [Biopsychosocial \(BPS\) Model](#)



Another study suggests PNE is ineffective - <https://brookbushinstitute.com/articles/pain-neuroscience-education-pne-is-relatively-ineffective-research-confirmed>

Review and Commentary on the Comparative Studies Investigating Pain Neuroscience Education by Brent Brookbush DPT, PT, MS, CPT, HMS, IMT

PAIN SCIENCE HAS A PROBLEM

Pain science research currently has an interesting problem. It is amazing work, by incredible professionals, that has helped to inform theoretical frameworks on physical rehabilitation. However, the relatively strong correlations made between pain and psychosocial factors (demonstrated in some research studies), have resulted in a focus on addressing these psychosocial factors with cognitive interventions. The problem is these cognitive approaches do not have a large effect on the factors they are attempting to address, and worse, changes in cognitive factors seem to have little if any effect on objective outcome measures (e.g. pain-free range of motion, neck disability index scores, etc.). At the very least, these cognitive approaches are far less effective than manual therapy, specific exercise, and other effective modalities. Author's note, it seems that a surge in the amount of research published on pain science was hijacked by a relatively ineffective application of that research (e.g. pain science education (PNE)). Worse still, some individuals have asserted that this surge in research and popularity of PNE programs is evidence of PNE being "new and better" while discrediting other more effective



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Dr. Brent Brookbush, CEO of Brookbush Institute

modalities. This type of strategy has won political campaigns, but it is not evidence-based practice.

Thought Experiment on "Best Possible Treatment"

Imagine placing every possible physical rehabilitation technique in a pile on a table, regardless of our professional titles or personal preferences. Which techniques would we select from this pile for our patients? I am assuming most of us would select the best possible techniques or the best possible combination of

techniques. To keep it relatively simple and objective, we could base the definition of "best possible" on two objective measures: reliability (the percentage of time it results in a positive outcome) and effect size (the amount of improvement made). The number of techniques we could select would be limited by the length of a session; that is, we could only select the number of techniques that we could comfortably perform within the length of a normal session. Based on these standards, pain neuroscience education (PNE) would likely rarely if ever be chosen in an outpatient orthopedic physical rehabilitation and/or sports medicine clinic (e.g. issues including chronic low back pain, shoulder impingement syndrome, acute ACL ruptures, etc.). Based on the research below, PNE may be the ice and TENS of the next generation of therapists. Occasionally, these modalities are beneficial to improve a patient's compliance or ability to initially endure an intervention plan, but they cannot be considered the basis of a therapeutic approach, should comprise an exceedingly small portion of therapy time, and billing for these modalities should be minimal.

- Fact: The factors that correlate most with the experience of pain, are not as important as the magnitude of change that can be made for any correlated factor, and the effect that change has on patient outcomes.

INCLUDED IN THIS REVIEW

This review includes all of the research that could be located comparing pain neuroscience education (PNE) to other interventions for conditions commonly addressed in an outpatient orthopedic or sports medicine clinic. This review does not include research investigating the treatment of complex chronic pain conditions (e.g. complex regional pain syndrome (CRPS)). Further, since the goal of this article was to determine the relative efficacy of PNE, studies that lacked a direct comparison to another intervention were not included. Some research suggests that PNE may have a positive effect on certain outcome measures when compared to controls; however, our goal was to determine whether this intervention exhibited a superior benefit for patients, and should be prioritized over other effective interventions. There is always a limit on session time, and the time a client or patient is willing to commit to therapy.

RESEARCH SUMMARY STATEMENT

The randomized controlled trials (RCTs) available that compare pain neuroscience education

(PNE) to other interventions imply that PNE is unlikely to be more effective than biomedical education, and is unlikely to result in additional benefit when added to supervised manual therapy, exercise, and/or the combination of other effective interventions. Further, the addition of manual therapy and exercise to PNE reliably results in significant improvement in patient outcomes, implying that PNE alone cannot be considered an optimal treatment approach. The addition of PNE to a home exercise program may enhance patient outcomes (perhaps due to enhanced effort and compliance during exercise). Last, PNE does reliably improve Tampa Scale of Kinesiophobia (TSK) scores; however, the validity of this finding and/or correlation with other recovery outcome measures is questionable.

Of the 10 studies in this review comparing similar intervention plans with and without PNE, 4 studies demonstrate no difference, 3 studies only demonstrate a significant difference in TSK scores, and 3 studies exhibit significant improvements in 1 additional outcome measure. Unfortunately, the additional outcome measures are likely statistical variance. These additional outcome measures are either easily influenced by subjective or cognitive factors (FABQ and Pain), represent a difference in one outcome with other similar outcomes not demonstrating difference, and/or the difference was only demonstrated during one of the multiple time points. In short, the gross majority of comparative research demonstrates that PNE is not reliably effective for improving objective patient outcome measures.

FOR THE REST OF THIS ARTICLE, INCLUDING A SYSTEMATIC REVIEW OF ALL AVAILABLE RESEARCH, FOLLOW THE LINK TO THE FULL ARTICLE.

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