Published in final edited form as:

Pain. 2009 February ; 141(3): 189–190. doi:10.1016/j.pain.2008.12.012.

Enhancing daily functioning with exposure and acceptance strategies: An important stride in the development of psychological therapies for pediatric chronic pain

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Because children's school attendance, social functioning, physical activity, and family responsibilities [6] may be impacted in significant ways by longstanding chronic pain, enhancing daily functioning is often the primary goal for psychological treatment of youth with chronic pain. Descriptive research on the functional status of children with chronic pain has increased considerably in the last decade (e.g., [1,4]), however, treatment research focused on enhancing children's functioning continues to be lacking, particularly among pediatric, non-headache pain populations. The paper by Wicksell and colleagues (this issue [9]) evaluating exposure and acceptance strategies to improve function in youth with longstanding, complex pain problems represents an important step in the literature on randomized controlled trials (RCTs) of psychological therapies for pediatric chronic pain.

Several systematic reviews provide evidence that psychological treatments can effectively reduce pain intensity in children and adolescents with headaches and abdominal pain. Eccleston et al.'s [2] review reports an odds ratio for clinically significant reduction in pain (defined at 50%) as 9.62 and the number needed to treat was 2.32. In another recent meta-analysis of psychological interventions for children with headache, Trautmann et al. [7] also report higher rates of clinically significant reductions in pain in youth receiving psychological treatment compared to untreated youth (70% vs. 30%). Despite the positive findings for behavioral and cognitive-behavioral interventions for lessening children's pain, the influence of treatment on children's functional status is much less clear. Very few randomized controlled trials have measured change in children's physical functioning from pre- to post-treatment and even fewer RCTs have shown evidence of any significant functional changes.

The study conducted by Wicksell and colleagues highlights several contemporary issues in psychological treatment studies for pediatric chronic pain including: 1) trial quality, 2) effectiveness of psychological treatments at targeting non-pain outcomes, 3) considerations in adapting behavioral and cognitive-behavioral treatment to be more relevant to severely disabled populations, and 4) limitations in measures used to assess children's functional status.

In considering issues of clinical trial quality, there are several challenges and shortcomings apparent in most of the literature on psychological therapy for chronic pain in children. The design of treatment studies to include an appropriate comparison or control group remains an

important challenge. The vast majority of previous studies have used wait-list control conditions, which carry with it limitations. In the Wicksell et al study, a good, alternative treatment group has been used, a multidisciplinary outpatient pain clinic treatment. Despite differing amount of contact (i.e., number and type of treatment visits) that complicated some of the comparisons between treatment groups, the use of a multidisciplinary outpatient pain clinic treatment group is a useful “real world” comparison. Another important trial quality issue is having a sample size that is sufficient to detect medium effect sizes, and to examine mechanisms of treatment response. Small sample sizes (including in the Wicksell study) pervade the pediatric RCT literature, and there is not yet any precedence for multi-site collaboration. Multisite studies will be needed to obtain sufficient sample sizes in pediatric studies to allow for not only a stronger test of treatment effects but to examine mechanisms and individual differences in treatment response.

In considering whether psychological treatment can affect non-pain outcomes in children, acceptance and commitment therapy (ACT), as an extension of traditional CBT, offers several strategies that may be particularly useful. Because traditional behavioral and CBT interventions center on children’s development of pain coping skills (e.g., relaxation, etc), they may be biased toward a primary focus on pain relief. In contrast, ACT through its emphasis on the importance of accepting pain symptoms and working toward valued goals, using interventions such as exposure, cognitive defusion, and mindfulness, de-emphasizes pain relief and introduces in a more focused way goals directed toward enhancing daily functioning. Parents were also incorporated into treatment in meaningful ways in this trial, an important advantage in working toward enhancing children’s daily functioning. Perhaps it is not surprising then that the ACT treatment was successful at effecting functional change.

A related issue is consideration of how to adapt treatment content to be more appropriate to severely disabled populations. Given that the majority of previous behavioral and CBT interventions have been delivered to less disabled pediatric headache patients, some consideration of the content and focus of treatment is necessary to ensure relevance to non-headache chronic pain and more severely disabled populations. For example, while the focus on coping skills such as relaxation is appropriate to the headache population, it is unclear whether this treatment component is effective in non-headache chronic pain. The few CBT trials that have been used in non-headache populations have by and large used similar treatment approaches. A reappraisal of CBT may be needed that takes into account the population of the challenging group of youth who have significant and longstanding pain-related disability.

The last contemporary issue raised by this study concerns the use of reliable and valid measures appropriate for assessing functional status in children with chronic pain. Despite identification of physical and role functioning as important outcome domains in clinical trials for chronic pain in youth [5], there are shortcomings in available measures of children’s functional status. Commonly used measures of children’s physical functioning, such as the Functional Disability Inventory [8] and the Bath Adolescent Pain Questionnaire [3], have not yet produced data on sensitivity to change, nor do such measures have established cutoff scores to interpret post-treatment scores as situated in the clinical versus normative range. Moreover, as was the case in the Wicksell study, there are even more limited options when measures need to be translated into other languages, as few measures of children’s functional status have been validated in languages other than English. Future research attention is needed to produce validation data on measures of children’s functional status that may increase their validity for use in clinical trials.

Although many challenges lie ahead, Wicksell and colleagues present a study that represents progress toward considering the content and focus of psychological interventions for pediatric severe chronic pain and disability.

Acknowledgements

The author has no financial or other relationships that might lead to a conflict of interest

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