Measuring parent beliefs about child acceptance of pain: A preliminary validation of the Chronic Pain Acceptance Questionnaire, parent report

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ABSTRACT

Parent perceptions of and responses to pain have been identified as important factors in understanding pain-related disability among children and adolescents with chronic pain. The ability to accept chronic pain rather than focus on ways to avoid or control it has been linked to positive outcomes in chronic pain research. To examine parent beliefs about child acceptance of pain, the Chronic Pain Acceptance Questionnaire, parent report (CPAQ-P), was developed and administered to 195 parents of children with persistent pain evaluated in a multidisciplinary pain clinic. Analyses support the internal consistency of the CPAQ-P (α = .89) and 1-month stability estimates were acceptable for the total scale score (α = .72), and results suggest some responsivity to change. Exploratory factor analysis identified a 2-factor model with 4 items removed from the original 20-item measure. Confirmatory factor analysis strongly supported the modified version. For construct validity, parent beliefs about child acceptance were negatively correlated with parent pain catastrophizing and parent fear of pain. Greater acceptance was also negatively associated with protective parent responses to pain. These results support the CPAQ-P as a promising measure for assessing parent beliefs about child acceptance of pain and reinforce the importance of the social context and parental influence on child functioning.

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1. Introduction

Chronic pain in children and adolescents is a serious public health concern, affecting approximately 15–25% of youth [13,30] and affecting the entire family [29]. In an attempt to ameliorate pain-related disability and emotional distress, acceptance-based treatment approaches, which focus on the ability to accept pain as opposed to avoiding or controlling it, have been found to be effective [23–25,38,39]. Specifically, acceptance of pain has been found to be associated with improved functioning and less distress in adults with chronic pain [5,19,20,28], and acceptance is emerging as an important construct in the treatment of adolescents with chronic pain [42,43].

The Chronic Pain Acceptance Questionnaire has been identified as a valid and reliable measure of acceptance in both adults (CPAQ; [26]) and adolescents (CPAQ-A; [22]) with chronic pain. The CPAQ [26] posits two important dimensions of acceptance: Activity Engagement and Pain Willingness. Activity Engagement assesses an individual’s participation in routine daily activities in the presence of pain, while Pain Willingness assesses the degree to which pain is permitted to be a part of an individual’s life experience without efforts to control or avoid it.

Beyond an individual’s own acceptance of pain, the social context of pain is highly influential on pain and functioning. For children living with chronic pain, parental factors such as distress as well as behavioral responses have been shown to significantly influence children’s pain and functional outcomes [4,6,22]. Because of its importance of parents, several measures that assess parent beliefs and behaviors in the context of having a child with chronic pain have been developed (eg, Pain Catastrophizing Scale for Parents (PCS-P; [14]), Bath Adolescent Pain–Parent Impact Questionnaire (BAP-PIQ; [17]), Parent Psychological Flexibility Questionnaire (PPFQ; [21]). These measures allow researchers and clinicians to explore the extent to which parents have adopted certain beliefs or behaviors that may impact child pain-related outcomes. In line with development of these important measures, the aim of the present study is to develop and validate the Chronic Pain Acceptance Questionnaire, parent report (CPAQ-P). In conceptualizing this adaptation, we framed items such that parents were endorsing their beliefs regarding their child’s participation in routine daily activities (Activity Engagement) and willingness to allow pain to be a part of their child’s life (Pain Willingness).

We hypothesized that the CPAQ-P would consist of two factors: Activity Engagement and Pain Willingness. We also hypothesized that the
total scale and subscales of the CPAQ-P would be internally consistent. To examine construct validity, we examined associations between acceptance and parent and child factors. Given that acceptance is hypothesized to be a adaptive construct and that parent pain catastrophizing [39,14], pain-related fear [33], and protective responses [18,31,32] have all been associated with poor outcomes, we hypothesized that greater parent beliefs of child acceptance would be negatively correlated with these variables. For child functioning, we hypothesized that parent beliefs of child acceptance would be associated with less pain-related functional disability and better school functioning. Given the lack of correlation between child pain acceptance and pain ratings [22], we anticipated a similar relationship for parents.

2. Methods

2.1. Participants

All patients 8–17 years of age and an identified parent who underwent a multidisciplinary pain evaluation at a tertiary pain clinic in a large, urban northeast US pediatric hospital between June 2009 and August 2010 were eligible for the study. Altogether, 202 of the 265 families approached consented to participate (76.2% participation rate). Primary reasons for refusal were lack of interest or time. Among them, 195 parent–child dyads had sufficient data for inclusion in the current analyses, resulting in a 96.5% completion rate. Children were predominantly white (92.3%) and girls (85.6%), consistent with the demographics of this tertiary-care clinic. The mean child age was 13.7 years (SD 2.3 years). Participating parents were predominantly mothers (92%). Race and age for the parent were not collected. Physician-assigned pain diagnoses for patients included the following: musculoskeletal pain (34%), neuropathic pain (eg, complex regional pain syndrome 32%), abdominal pain (12%), back pain (11%), gynecological or genitourinary pain (5%), headache (3%), and other pain (3%; eg, chest pain). Length of time since onset of pain ranged from 1 to 202 months, with a median duration of 14 months with 8% experiencing pain symptoms for less than 3 months before this clinic visit. Most parents were married (82%), and many were well educated (ie, college graduate or higher: 56.8% for mothers, 53.5% for fathers). Family socioeconomic status (SES) based on the 4-factor index of social status [16] ranged from 12 (laborer) to 66 (business owner; professional), with a mean of 45 (SD 12).

2.2. Participants: 1-month stability

Of the 195 participants, the first 146 parents and children enrolled were contacted 4 weeks after their initial evaluation at the pain clinic, and 108 (74%) returned follow-up measures. Among the 38 who did not follow up, reasons for nonparticipation included: did not respond after repeated attempts at contact (n = 21), could not be reached (n = 5; phone disconnected, no voice mail), and indicated they would return follow-up forms and did not (n = 12). No significant differences were found between families who completed follow-up interviews and those who did not on child age, child sex, parent marital status, SES, child duration of pain, and child pain level (current, lowest, highest, average), and CPAQ-P scores at the initial evaluation.

2.3. Measures

Basic demographic (eg, age, sex) and medical information (eg, diagnosis assigned by the evaluating pain physician) was collected from patient charts.

2.3.1. Acceptance

The Chronic Pain Acceptance Questionnaire, Parent report (CPAQ-P) is a modified version of the validated Chronic Pain Acceptance Questionnaire (CPAQ) [26]. The CPAQ is a 20-item measure consisting of two subscales: activity engagement (11 items) and pain willingness (9 items). Activity engagement reflects the degree of participation in regular daily activities in the presence of pain (eg, “My life is going well, even though I have chronic pain”). Pain willingness reflects the absence of attempts to avoid or control pain (eg, “I avoid putting myself in situations where my pain might increase”—reverse keyed). Previous research supports the internal consistency, factor structure, and validity of the CPAQ [26,40]. To create a parent version of this measure, we retained the response format of the adult version of 0 = “never true” to 6 = “always true.” Each item was modified to reflect the parents’ perspective with some items also slightly simplified or clarified. For example item 1 “I am getting on with the business of living no matter what my pain level is” was changed to “My child is getting on with life no matter what the pain level is” and item 7 (reverse coded) “I need to concentrate on getting rid of my pain” was changed to “My child needs to concentrate on getting rid of his/her pain” (Table 1).

### Table 1

<table>
<thead>
<tr>
<th>Item</th>
<th>Activity engagement</th>
<th>Pain willingness</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. My child leads a full life even though (s)he has chronic pain.</td>
<td>.90</td>
<td></td>
</tr>
<tr>
<td>6. Although things have changed, my child is living a normal life despite chronic pain.</td>
<td>.85</td>
<td></td>
</tr>
<tr>
<td>2. My child’s life is going well, even though (s)he has chronic pain.</td>
<td>.81</td>
<td></td>
</tr>
<tr>
<td>1. My child is getting on with life no matter what the level of pain is.</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>12. Despite the pain, my child is now sticking to a certain plan in life.</td>
<td>.68</td>
<td></td>
</tr>
<tr>
<td>15. When my child’s pain increases, (s)he can still take care of responsibilities.</td>
<td>.64</td>
<td></td>
</tr>
<tr>
<td>8. There are many activities my child does when feeling pain.</td>
<td>.62</td>
<td></td>
</tr>
<tr>
<td>19. It is a relief to realize that my child does not have to change their pain to get on with living life.</td>
<td>.46</td>
<td></td>
</tr>
<tr>
<td>10. Controlling pain is less important than other goals in my child’s life.</td>
<td>.42</td>
<td></td>
</tr>
<tr>
<td>14. Before my child can make any serious plans, (s)he has to get some control over their pain.</td>
<td>.71</td>
<td></td>
</tr>
<tr>
<td>13. Keeping my child’s pain level under control takes first priority whenever (s)he is doing something.</td>
<td>.66</td>
<td></td>
</tr>
<tr>
<td>18. My child’s worries and fears about what pain will do to him/her are true.</td>
<td>.64</td>
<td></td>
</tr>
<tr>
<td>7. My child needs to concentrate on getting rid of his/her pain.</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td>20. My child has to struggle to do things when (s)he has pain.</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td>17. My child avoids putting themselves in situations where pain might increase.</td>
<td>.49</td>
<td></td>
</tr>
<tr>
<td>16. My child will have better control over life if (s)he can control negative thoughts about pain.</td>
<td>.41</td>
<td></td>
</tr>
</tbody>
</table>

Eigenvalue | 5.9 | 1.4 |
% Variance | 36.7% | 8.8%

*EFA was performed using a maximum-likelihood procedure specifying a 2-factor solution and oblique rotation. Only factor loadings >.31 are presented. Items 3, 4, 5, and 11 were removed as a result of low item-total correlation and loadings.*
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