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Acceptance and Commitment Therapy for chronic pain: A diary study of treatment process in relation to reliable change in disability

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Abstract

In chronic pain treatment, a primary goal is reduced disability. It is often assumed that a central process by which disability reduction occurs is pain reduction. Conversely, approaches such as Acceptance and Commitment Therapy (ACT) posit that pain reduction is not necessary for reduced disability. Instead, disability reduction occurs when responses to pain are changed, such that as unsuccessful struggles for pain control decreases and engagement in personally-valued activities increases. Treatment outcome studies have supported ACT's effectiveness; however, less work has examined how within-treatment patterns of change relate to treatment success or failure (i.e., decreased or sustained disability). The present study, therefore, sought to examine this issue. Specifically, struggles for pain control and engagement in valued activities were recorded weekly in 21 patients who completed a four week interdisciplinary ACT intervention for chronic pain. It was hypothesized that the presence or absence of reliable change in disability at a three month follow-up would be predicted by within treatment patterns of change in the weekly data. At follow-up, 47.6% of patients evidenced reliable disability reduction. The expected pattern of change occurred in 81.0% of patients—specifically, when pain control attempts decreased and engagement in valued activities increased, reliably reduced disability typically occurred, while the absence of this pattern was typically associated with a lack of reliable change. Further, changes in pain intensity, also assessed weekly, were unrelated to reliable change. Overall, these results provide additional support for the ACT model and further suggest some possible requirements for treatment success.

Keywords

Acceptance and Commitment Therapy; Chronic pain; Change processes

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Conflict of interest statement

Dr Vowles was employed by the rehabilitation hospital where the data presented in this manuscript was collected during the time of its collection. Drs. Fink and Cohen have no conflicts of interest to disclose.

1. Introduction

Chronic pain, typically defined as persistent pain that has continued for longer than three to six months, is common, costly, and frequently associated with significant disability (Breivik, Collett, Ventafridda, Cohen, & Gallacher, 2006; Gaskin & Richard, 2012). For example, chronic pain is associated with disruptions in functioning across multiple areas, including daily activity, vocational or scholastic achievement, interpersonal relationships, and emotional wellbeing (Breivik et al., 2006; Smith et al., 2001). In addition, chronic pain does not appear to readily remit, as several longitudinal studies indicate that the majority of pain sufferers will continue to experience long-term pain (Andersson, 2004; Elliott, Smith, Hannaford, Smith, & Chambers, 2002) and presumably long-term disability.

The strong relation between pain and disability has led to a focus on pain reduction for many treatment approaches. For example, analgesic medications, injections, invasive procedures, and devices (e.g., transcutaneous electrical nerve stimulators, spinal cord stimulators) target pain reduction as the primary objective and indicator of success (Breivik, Campbell, & Nicholas, 2008). It is likely that the prominence given to pain relief is based on the commonsense notion that pain reduction is a necessary precursor to disability reduction.

In contrast, psychosocial approaches to the treatment of chronic pain have historically focused, at least to some extent, on altering responses to pain such that these responses lead to disability reduction (e.g., Fordyce, 1976; McCracken, 2005; Turk, Meichenbaum, & Genest, 1983). A recent example is that of Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 2012), which has amassed considerable evidence with regard to treatment effectiveness (see Vowles & Thompson, 2011 for a review) and is considered an intervention with “strong” empirical support according to the American Psychological Association’s (APA) Division of Clinical Psychology (APA, 2013). In attempting to change responses to the experience of persistent pain, the overarching focus of ACT is to assist pain sufferers in engaging in a flexible and persistent pattern of values-directed behavior while in contact with continuing pain and discomfort, particularly when efforts to control or reduce pain or discomfort have failed in the past or contributed to greater difficulties over the longer term (McCracken, 2005; McCracken & Vowles, 2014; Vowles & Thompson, 2011). Change in pain responses has, thus far, been operationalized in two ways: (1) reducing the occurrence of pain control efforts and (2) increasing the frequency of activities that directly contribute to valued living. It is assumed that this pattern of change within treatment will result in reduced disability over the longer term, even with continuing pain. Although supportive and corroborative evidence is provided by correlational studies (McCracken, Vowles, & Eccleston, 2005; Vowles, McCracken, & Eccleston, 2007; Vowles, McCracken, & O’Brien, 2011) and analyses of mediation (Vowles, Witkiewitz, Sowden, & Ashworth, 2014; Wicksell, Olsson, & Hayes, 2010, 2011), to date, no study has examined patterns of change in these treatment processes over the course of intervention at the level of individual patients in relation to the presence or absence of significant disability reduction. In other words, while several studies have indicated that average improvement in measures of ACT processes are related to average improvement in disability, it may be of use to examine data at the level of individual patients as these data allow for a more nuanced and informed evaluation of how change in pain control efforts and valued activity relates to changes in

disability. For example, analyses at the level of the individual participant may afford information with regard to specific characteristics of successful or unsuccessful intervention, such as whether changes in pain control and valued activity are possible prerequisites for successful disability reduction.

In summary, although it appears that ACT for chronic pain is effective, it is not the theorized pattern of change in pain control efforts and engagement in valued activity occurs or (b) that these patterns of behaviors are related to reduction in disability. Specifically, from the perspective of the ACT model, one would hypothesize that successful reduction in disability necessitates that pain control attempts decrease over the course of treatment, while engagement in personally-valued activities increase. Conversely, the absence of such a pattern of change should be associated with no change in disability. The primary purposes of the present study was to conduct an examination of these hypotheses in a sample of chronic pain patients completing an interdisciplinary course of ACT for chronic pain, as well as a three-month follow-up assessment of disability. In addition, a related purpose of this study was to examine how changes in pain intensity over the treatment period related to changes in disability at follow-up. With regard to this latter purpose, we hypothesized that changes in pain intensity would have an inconsistent relation with changes in disability and that pain reduction would not be a necessary precursor to disability reduction.

2. Method

2.1. Participants

Data were provided by 21 patients (61.9% female) who completed a four week interdisciplinary ACT rehabilitation program for chronic pain and a three month follow-up assessment. On average, patients were 44.8 years of age ($SD=11.9$) and had completed 14.0 years of formal education ($SD=2.9$). All participants were living in the United Kingdom and reported their ethnicity as White European. Almost half were married or cohabitating (47.6%) with smaller portions reporting they were single (23.8%), divorced (19.0%), or widowed (9.5%). Only a minority were working full or part time (14.3% and 9.5%, respectively), whereas the majority were not working because of pain (57.1%). The remaining individuals (19.0%) were either unemployed for a reason unrelated to pain or reported their vocation as homemaker. Most were in receipt of benefit, disability or wage replacement payments (71.4%).

Median pain duration across the sample was 3.3 years (range 0.3–30.8 years). The most frequently reported primary site of pain was low back (42.9%), followed by full body (23.8%), neck (14.3%), mid-back (9.5%), and upper limb (9.5%). Almost half of the sample (47.6%) also reported a secondary site of pain, which included lower limbs (19.0%), low back (14.3%), upper limb (9.5%), or abdomen (4.8%). For most patients (81.0%), diagnoses were of a general, non-specific, or descriptive nature (e.g., chronic nonspecific low back pain, chronic pain syndrome). When available, diagnoses were as follows: fibromyalgia (9.5%), sciatica (4.8%), and fracture-related pain (4.8%).

2.2. Measures

2.2.1. Disability—The Sickness Impact Profile (SIP; Bergner, Bobbitt, Carter, & Gilson, 1981), a 136 item scale which assesses functioning across multiple domains, was completed by all participants at the onset of treatment and at a three month follow-up appointment. The SIP is an established measure of disability in healthcare settings and has good evidence of psychometric properties and sensitivity to change (Vowles, Gross, & McCracken, 2007; Vowles & McCracken, 2008). Each of the SIP items lists an area of difficulty and patients are asked to endorse the items that apply to them on that day in relation to their health (e.g., “I spend much of the day lying down in order to rest”; “I am going out for entertainment less often.”; “I am not doing heavy work around the house.”). Scoring on the SIP ranges from 0 to 1, with greater scores indicating higher levels of disability.

2.2.2. Within-treatment diary—At the mid-point of each of the four weeks of treatment, each patient completed a four item diary. Diary items are displayed in Table 1, each consisted of a 0–10 numerical rating scale (NRS) with verbal anchors at the endpoints and also specified a rating time-frame of the previous week.

2.2.3. Pain intensity—Average pain intensity over the past week was assessed via an NRS with the lower anchor labeled as “None” and the upper as “Worst Possible” (item 1 in Table 1). This method of assessing pain is both well-established and widely recommended (Campbell & Vowles, 2008; Dworkin et al., 2005; Jensen & Karoly, 1992; Nicholas, Asghari, & Blyth, 2008)

2.2.4. Pain control—Two items were constructed to assess the degree to which patients were engaging in the struggle for pain control. In many respects, the content of these items was based on existing validated measures in this area, such as the Chronic Pain Acceptance Questionnaire (CPAQ; McCracken, Vowles, & Eccleston, 2004), Brief Pain Response Inventory (McCracken, Vowles, & Zhao-O’Brien, 2010; BPRI), and Psychological Inflexibility in Pain Scale (Wicksell, Lekander, Sorjonen, & Olsson, 2010). As these items were intended to evaluate a more specific and narrow content area, struggles for pain control specifically, as opposed to the broader assessment of responses to pain in these measures and we therefore expected moderate correlation with established measures. The first of these items (item 2 in Table 1) specifically inquired about degree of effort put forth to control pain-related difficulties and the second, reverse scored item (item 3), inquired about willingness to experience pain and distress. The items were summed to form an index of pain control efforts over the previous week.

Given that these diary items were created specifically for this study, we performed an initial evaluation of convergent validity using a dataset composed of 89 patients presenting for an assessment appointment in the same clinical service (Unpublished data). Specifically, correlations between the summed diary items and the total scores of the CPAQ and BPRI was calculated, which indicated a statistically significant relation, $r=-0.25$ and -0.30 , respectively, both p 's < 0.02 . Higher scores on the CPAQ and BPRI, which are typically associated with better emotional and physical functioning in chronic pain patients

(McCracken et al., 2010; Reneman, Dijkstra, Geertzen, & Dijkstra, 2010), were associated with less intensive pain control efforts.

2.2.5. Engagement in valued activity—A method similar to that used in the development of the items assessing pain control effort was used for the items concerning engagement in valued activity. Both items asked patients about the effectiveness of their actions, with the first inquiring about quality of living and the second about areas of living that matter most (items 4 and 5 in Table 1, respectively). Again, items content was based on an established measure in this area (e.g., Chronic Pain Values Inventory; CPVI; McCracken & Yang, 2006) and the unpublished assessment database was used to calculate a correlation coefficient between the sum of both diary items and this measure. The two diary items significantly correlated with the Values Discrepancy subscale of the CPVI (the difference between values importance and success), $r=0.37$, $p<0.001$, and also with the total score of the CPAQ, $r=0.37$, $p<0.001$. In other chronic pain samples, smaller discrepancy scores on the CPVI are correlated with better physical and emotional functioning (McCracken & Yang, 2006; Vowles, McCracken, Sowden, & Ashworth, 2014).

2.3. Treatment program

The treatment program was provided within a rehabilitation hospital located in the Midlands of the United Kingdom. Treatment was provided by an interdisciplinary team of providers, including clinical psychology, anesthesiology, physical therapy, and nursing. Treatment took place on two consecutive days each week for a total of four weeks. Each treatment day lasted approximately 6.5 h, with 2 h of physical conditioning (including 1 h each day in a gym), 1.5 h of psychological content (including 30 min of mindfulness training each treatment day), and 1 h of values clarification and planning of values consistent activities. The remaining time was spent in health/medical education sessions (e.g., appropriate use of pain medications) and skills training (e.g., reflective listening, mindful communication, pacing for values success).

A distinctive feature of the intervention was the consistent application of the ACT model across treatment sessions and provider disciplines. Medical education on the appropriate use of pain medications, for example, emphasized enhanced awareness of the effects of medications and, where appropriate, advocated for strategic analgesic use to promote engagement in valued activities. Likewise, the physical activity sessions emphasized consistency in activity, present-focused awareness of bodily sensations while engaged in physical activity, and deliberate use of physical activity to promote engagement in valued activity. In order to reinforce treatment integrity, a 60-min clinical team meeting was held on each day of treatment, a 60-min clinical training seminar was held each week, and treatment components were manualized.

2.4. Analytic approach

Overall, analyses sought to determine how patterns of change in the weekly diary data related to the success or failure of treatment. In this case, treatment success was defined as a reliable decrease in disability between treatment onset and three month follow-up and

treatment failure was defined as either (a) a lack of reliable change or (b) a reliable worsening of disability.

Reliable change in disability from pre-treatment to three month follow-up was calculated using Jacobson and colleagues' Reliable Change Index (RCI; Jacobson, Roberts, Berns, & McGlinchey, 1999; Jacobson & Truax, 1991), which allows one to determine if the change observed within each patient is likely to be in excess of change that could be accounted for by measurement error alone. Calculation of RCI makes use of indices of measure reliability (e.g., test-retest reliability) and sample variability data (e.g., standard deviation) to determine a standard error of the difference score (Sdiff). The Sdiff is then multiplied by 1.64 to obtain a confidence interval of .90 (excluding the 5.0% of the distribution at each tail) to determine the requisite amount of change required in order for a single individual to be classified as "reliably changed" in a direction of improvement or deterioration. The RCI has been used previously in evaluations of interdisciplinary treatment for chronic pain (Morley Williams, & Hussain, 2008; Vowles et al., 2011; Vowles et al., 2014). Because of the small sample size in the present study, which could result in unreliable standard deviations, we used the RCI cut-point of the Vowles et al. (2011) study, which indicated a consistent cut-point across both a three month and three year follow-up assessment in 108 completers of an ACT intervention for chronic pain. Based on these previous data, an RCI cut-point of 0.12 on the SIP was used.

With regard to the assessment of change within the diary data, we anticipated there would be significant heterogeneity in patterns of change across participants; therefore, we elected to primarily utilize changes in the diary data from pre-treatment to post-treatment. With regard to the evaluation of these data, several large *N* studies have identified a value for clinically meaningful pain intensity reduction using an 11-point NRS (Farrar, Pritchett, Robinson, Prakash, & Chappell, 2010; Farrar, Young, LaMoreaux, Werth, & Poole, 2001; Ostelo et al., 2008; Salaffi, Stancati, Silvestri, Ciapetti, & Grassi, 2004). In each case, "clinically meaningful" is equivalent to patients rating pain intensity as "much improved" or "very much improved" following an intervention. Across all studies reviewed, a change in pain of 30–33% or a raw change of two points has been indicated as clinically meaningful (see also Dworkin et al. (2005) and Turk et al. (2008) for clinical guidelines advising the use of this same cut point). Given the consistency in these data, in addition to visual inspection, we looked at amount of change over the course of treatment in the diary data, using a change criteria of at least a 33% change or 2 point change, whichever was greater (i.e., for baseline ratings of 10, 9, 8, and 7, a 33% change was required; all other ratings required a change of two points). To our knowledge, there are no data on interpretation of other NRS items, such as those constructed for the present study. Therefore, in the absence of firm guidance, we elected to use the same change criteria across all diary items.

Given the approach outlined above, evaluation of the data consisted of three primary steps. First, patients were categorized with regard to the presence or absence of reliable change in disability at three month follow-up. Second, the diary data of each patient was inspected to determine if struggle for pain control and engagement in values based action each changed over the course of treatment by 33% or more than two points in relation to the beginning of

treatment. These two steps resulted in patients being assigned to one of four possible categories:

1. *Treatment success with change in ACT processes:* Reliable reduction in disability accompanied by decreased pain control efforts and increased engagement in valued activity.
2. *Treatment failure without change in ACT processes:* An absence of reliable reduction in disability accompanied by a lack of decrease in pain control efforts and/or a lack of increase in engagement in valued activity.
3. *Treatment success without change in ACT processes:* Reliable reduction in disability accompanied by a lack of decrease in pain control efforts and/or a lack of increase in engagement in valued activity.
4. *Treatment failure with change in ACT processes:* Reliable reduction in disability accompanied by decreased pain control efforts and increased change in the diary data.

Fig. 1 presents a visual representation of these four possible categorizations. Furthermore, as also noted in the figure, the categorization could be further classified as “Consistent with the ACT Model” or “Inconsistent with the ACT Model”. Specifically, the first of the above two categories represented a categorization that was consistent (i.e., either treatment success accompanied by change in treatment processes or treatment failure unaccompanied by change in the treatment processes). In contrast, the latter two categories represented a categorization that was inconsistent, as there was a mismatch between treatment success or failure and change in treatment processes.

The third and final step involved an assessment of change in pain intensity relative to reliable change in disability. Three categorizations were possible: decreased pain intensity, unchanged pain intensity, or increased pain intensity. A frequency count in relation to presence or absence of reliable change in disability was tallied for each of these three categories.

3. Results

The proportion of patients who evidenced reliable change in disability on the RCI was consistent with previous work in this area (e.g., Morley, 2011; Vowles et al., 2011). Specifically, 10 of 21 (47.6%) patients evidenced reliable improvement in disability three months following treatment conclusion. The remaining patients evidenced a lack of reliable improvement (no patient evidenced a reliable worsening of disability). On average, those with reliable change had a reduction of 0.17 on the SIP ($SD=0.06$; range: -0.12 to -0.29), whereas those with an absence of reliable change had an average reduction of 0.03 ($SD=0.04$; range: -0.10 to $+0.02$).

When reliable change in disability was evaluated relative to changes in pain control efforts and engagement in valued activities, a pattern of change that was consistent with the ACT model was observed in 17 of 21 (81.0%) patients. Specifically, of the ten patients with reliable improvement in disability, eight (80.0%) had both decreased pain control efforts and

increased engagement in valued activities over the course of treatment. Of the 11 patients without reliable change in disability, 9 (81.8%) had a pattern of change that was consistent with the ACT model. With regard to this latter group, patients without reliable change in disability had one of three possible change patterns in the diary data: no decrease in pain control efforts ($n=1$), no increase in engagement in valued activities ($n=2$), or both ($n=6$).

The remaining four patients (19.0%) had categorizations that were inconsistent with the ACT model. Two of these patients evidenced a reliable improvement in disability, but a lack of change in pain control efforts and engagement in valued activity. The other two patients did not have a reliable change in disability, but had decreased pain control efforts and increased engagement in valued activity.

Aggregate data for each of these four groups are displayed in Fig. 2. Individual data for each patient are available as a supplementary file (Supplementary Fig. 1).

With regard to changes in pain intensity over the treatment interval, a relatively unpredictable association with reliable change in disability was observed. Specifically, of those with reliable change in disability 9.5% ($n=2$) reported decreased pain, 33.3% ($n=7$) reported the same pain, and 4.8% ($n=1$) increased pain. In those without reliable change, 23.8% ($n=5$) reported decreased pain and 28.6% ($n=6$) reported the same pain. No patient without reliable change reported increased pain. The pain data are also displayed in Fig. 2 and the supplementary figure containing individual patient data, which, as anticipated, suggested significant heterogeneity in patterns of change across the four weeks of treatment.

4. Discussion

From the perspective of modern behavior analysis, a primary purpose of the treatment of chronic pain is to alter responses to pain, such that responses contribute to decreased disability (or at the very least do not contribute to increased disability). In technical terms, treatment aims to alter the stimulus function of pain, such that it no longer unavoidably occasions disability behavior. One therapeutic model, that of ACT, specifically hypothesizes that successful treatment necessitates (a) enhanced willingness to have pain without unnecessary and unhelpful struggles for pain control and (b) behavioral changes such that actions are purposively directed towards activities that bring meaning and satisfaction to living. The data of the present study are, to our knowledge, the first to explore this aspect of altered stimulus function within the context of ACT for chronic pain in relation to levels of disability after treatment.

Overall, the present results provide additional positive support for the ACT theoretical model with regard to its specified treatment processes. Of patients who simultaneously reported decreased struggles for pain control and increased engagement in valued activity over the course of a four week intervention, 80.0% evidenced a reliable reduction in disability at a three month follow-up. Conversely, in those without such a pattern of change, 81.8% evidenced an absence of reliable change. Perhaps the most striking finding concerned pain intensity over the course of treatment, as there was no discernible pattern of change associated with reliable change in disability or the lack thereof. These data provide an

possible indication of the necessary ingredients for successful disability reduction in chronic pain, at least when treated via the approach utilized here. In brief, it is possible that decreases in pain control efforts coupled with increases in engagement in valued activities are a requirement of disability reduction, while a change in pain is not a required outcome.

The proportion of patients who achieved reliable reduction in disability here is consistent with previous reports on the effectiveness of interdisciplinary ACT for chronic pain. These other studies also used the SIP to assess disability and found rates of reliable improvement at a three month follow-up appointment in 44–47% of patients (Vowles et al, 2011; Vowles et al., 2014; Vowles & McCracken, 2008). This consistency in findings across different patient samples is encouraging, particularly given that the RCI is a reasonably conservative measure of change. It is worth noting, however, that the majority of patients did not evidence reliable change in disability across any of these studies. In fact, the finding that the majority of patients do not exhibit reliable change in disability is a consistent finding in chronic pain treatment trials (Morley et al., 2008; Williams, Eccleston, & Morley, 2013) and the constancy in this type of finding highlights that there is room for improvement of these clinical technologies with regard to potency in occasioning behavior change, quality of delivery, and durability of effect after treatment conclusion (Morley, 2011). With regard to the findings of this study specifically, the overall concordance between change in processes and disability suggests that when treatment positively affects pain control efforts and engagement in valued activities, treatment success is likely, and when treatment does not positively affect these processes, treatment failure is likely.

It is also worth noting that there are aspects of the ACT model that were not investigated with the present study. Recently, the primary processes targeted for change within the model have been defined as three pairs of response options (Hayes et al, 2012) and there is evidence in chronic pain specifically to support this conceptualization (Vowles, Sowden, & Ashworth, 2014). The first pair, technically termed defusion and acceptance, relates to the decreased efforts for pain control assessed here. The second pair, values clarity and committed action, was reflected in the engagement in valued activities items. The third pair, present-focused awareness and self-as-context, were not assessed in the present study. This latter pair of responses refer to the within treatment augmentation of “mindfulness” type behaviors, where patients become more attentive to the present, which hypothetically augments their ability to respond effectively to the stimuli, internal and external, that are present. Although the treatment package included content specific to these aspects of pain responding, it was not assessed as part of the weekly diary data. In hindsight, this exclusion represents a limitation as it is possible that within-treatment change in these responses may also be relevant in the prediction of treatment success or failure.

This study also has other limitations. Perhaps foremost among these from a methodological standpoint are the lack of a comparison condition and absence of an assessment of steady state responding prior to the intervention. In addition, while the emphasis on data evaluation on a case-by-case basis allows perhaps a more fine-grained analysis of patterns of change over treatment, it is not clear if the relatively small sample size included in this study will generalize to the wider population. One final limitation is apparent from a conceptual level of analysis. Although this study attempted to focus more fully on the measurement of altered

stimulus functions of pain in those with chronic pain, it was not a true test. Rather, this was an observational study where a pattern of responding, theorized to be a proxy indicator of altered stimulus function, was specified and then evaluated relative to patient data. Taking these caveats into consideration, our findings are the first to attempt to examine the theoretical underpinnings of ACT for chronic pain in this way.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Appendix A. Supplementary material

Supplementary data associated with this article can be found in the online version at <http://dx.doi.org/10.1016/j.jcbs.2014.04.003>.

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		<u>Treatment Outcome at Three Month Follow-up</u>	
		<u>Treatment Success</u> <i>(Presence of reliable change in disability)</i>	<u>Treatment Failure</u> <i>(Absence of reliable change in disability)</i>
<u>Pattern of Change in ACT</u> <u>Treatment Processes</u>	<u>Processes Changed</u> <i>(Reduction in pain control efforts and increase in engagement in valued activity)</i>	Consistent with the ACT Model	Inconsistent with the ACT Model
	<u>Processes not Changed</u> <i>(No reduction in pain control efforts and no increase in engagement in valued activity)</i>	Inconsistent with the ACT model	Consistent with the ACT Model

Fig. 1. Possible patient categorizations based with regard to overall pattern of change in study variables and their consistency or inconsistency with the ACT model.

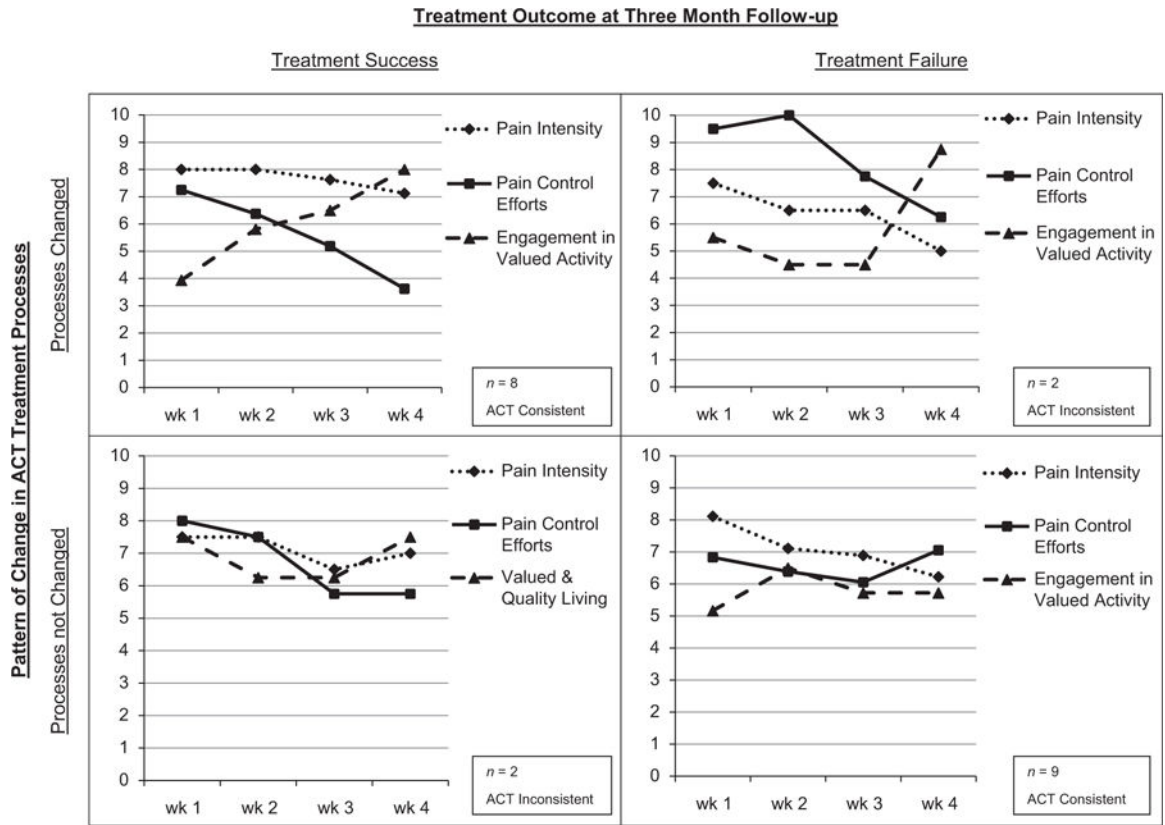


Fig. 2. Aggregated diary data by patient categorization (see Fig. 1 for full definition).

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Table 1

Weekly diary questions.

<u>Pain intensity</u>										
1. Rate how bad your pain was overall in the past week.										
None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Worst possible
0	1	2	3	4	5	6	7	8	9	10
Struggle for Pain Control										
2. Rate how much effort you put in to making pain or upsetting thoughts, feelings, or memories go away this past week.										
None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Most possible
0	1	2	3	4	5	6	7	8	9	10
3. Rate how willing were you were to have pain and distress in the past week. (reverse scored)										
Not at all	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Most possible
0	1	2	3	4	5	6	7	8	9	10
Engagement in valued activities										
4. Rate how effective you were in taking actions that contributed to a better, more vital, quality of living in the past week										
Not at all	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Most possible
0	1	2	3	4	5	6	7	8	9	10
5. Rate how effective you were this past week in making progress in the areas of your life that matter to you.										
Not at all	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Most possible
0	1	2	3	4	5	6	7	8	9	10