



A case study of acceptance and commitment therapy for a Japanese woman with chronic low back pain

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Background and Objective

What is the problem of pain?

Pain has been associated with fear and safety-seeking behaviors, such as avoidance or escape, and with physical and psychological disabilities, such as impairment and depression (Leeuw et al., 2007; Vlaeyen & Linton, 2000, 2012).

Acceptance and Commitment Therapy (ACT) for Pain

Veehof et al. (2016) examined the effects of acceptance- and mindfulness-based interventions for people with chronic pain. They found small effects for pain intensity, depression, disability and quality of life; and moderate effects for anxiety and pain-interference at post treatment. Additionally, ACT showed significantly greater effects on depression and anxiety than mindfulness-based intervention (MBSR and MBCT).

ACT for chronic pain in Japan

The effect of ACT for Japanese patients' activity or mental health has not yet been elucidated.

Objective

The current single case study examined the effect of an ACT program in an adult who met the criteria for chronic low back pain.

Client

A woman in her forties with chronic low back pain.

Occupation: A nursery school teacher who works full-time.

Family: A husband and four children (all children are high school students or above)

Personal History and Medical History

Ten years ago	She developed low back pain for the first time. However, pain killer allowed her to gradually recover.
Three – four years ago	She relapsed with low back pain. The abnormality of the tissue was not recognized, and medical therapy and physical therapy were ineffective.
One year ago	Her work loads gradually increased. During the same period, an acute low back pain developed.
One month ago	To avoid low back pain, she had to have the work that was causing her excessive low back pain taken over by her co-workers and family (e.g., cuddling her children, transporting heavy goods, engaging in a race or an outing, and laundry airing)

Scores of questionnaires at first session (#1)

- > Pain Catastrophizing Scale (PCS) (Sullivan et al., 1995)
 Rumination: 20, Helplessness: 12, Magnification: 4
- > Hospital Anxiety and Depression Score (HADS) (Zigmond & Snaith, 1993)
 Anxiety: 13, Depression: 9

Design and Treatment

An AB design with baseline and treatment phases was used.

Baseline	
#1	Confirmation of her chief complaint and screening
#2	Explanation about a case study and informed consent
#3-4	Confirmation of the progress of her low back pain
#5	Confirmation of a degree of psychological flexibility

ACT intervention		
#6	Introduction	Understanding the direction of the ACT program
#7	Acceptance	Personifying low back pain
#8	Acceptance	Learning function of avoiding pain by using ice
#9-10	Value	Looking for values from 100 values
#11	De-fusion	Distancing negative thoughts about pain
#12	Mindfulness	Observing what occurs now and being in the moment
#13	-	<Therapist asked her about acute low back pain.>
#14	Commitment	Defining valued goals
#15-16		Identifying obstacles to valued goals and seeking the solution

Follow-up	
#17-18	Confirmation of a chief complaint and a degree of psychological flexibility

Measures

Outcome measures

- (a) Frequency and variety of valued actions
- (b) Medical Outcome Study Short Form 36 (SF-36) (Fukuhara et al., 1998)
- (c) Roland-Morris Disability Questionnaire (RDQ) (Arimura et al., 1997)

Process measures

- (d) Acceptance and Action Questionnaire (AAQ) (Shima et al., 2013)
- (e) Cognitive Fusion Questionnaire (CFQ) (Shima et al., 2014)
- (f) Five Facet Mindfulness Questionnaire (FFMQ) (Sugiyama et al., 2012)

Results

Frequency and variety of valued actions

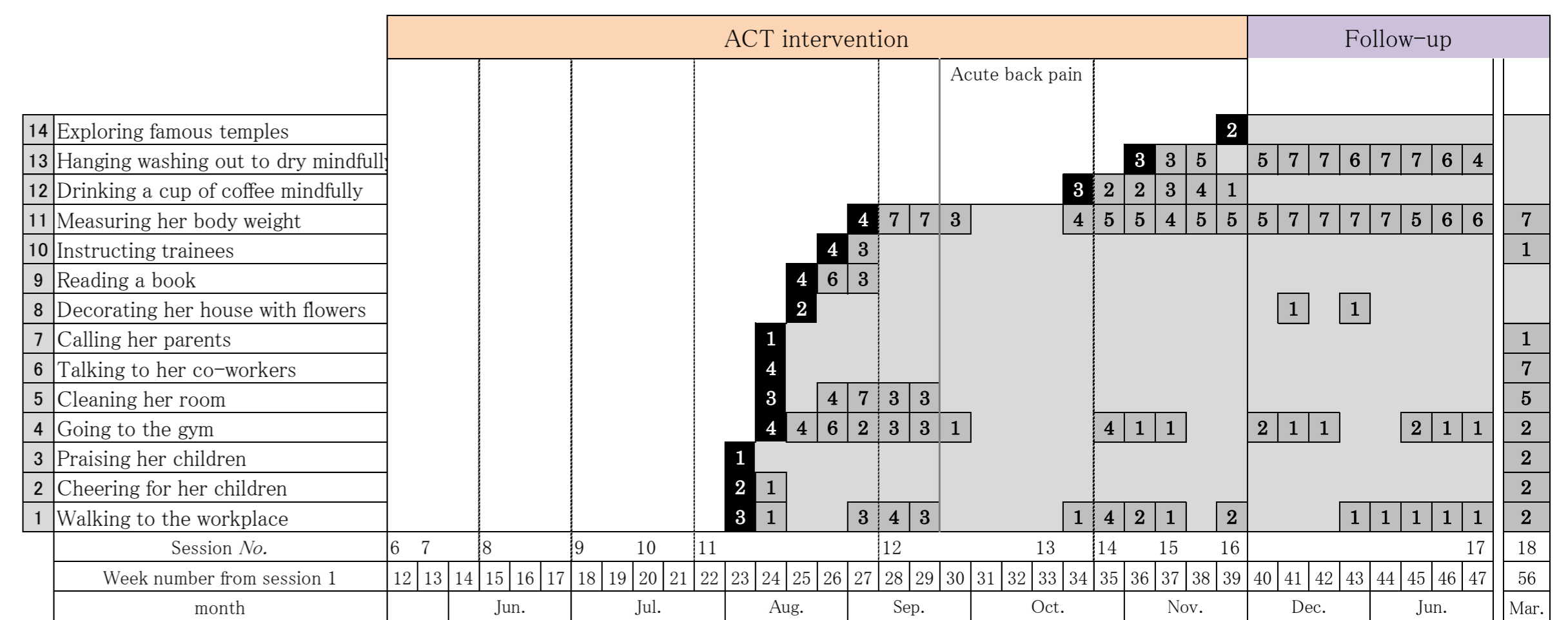
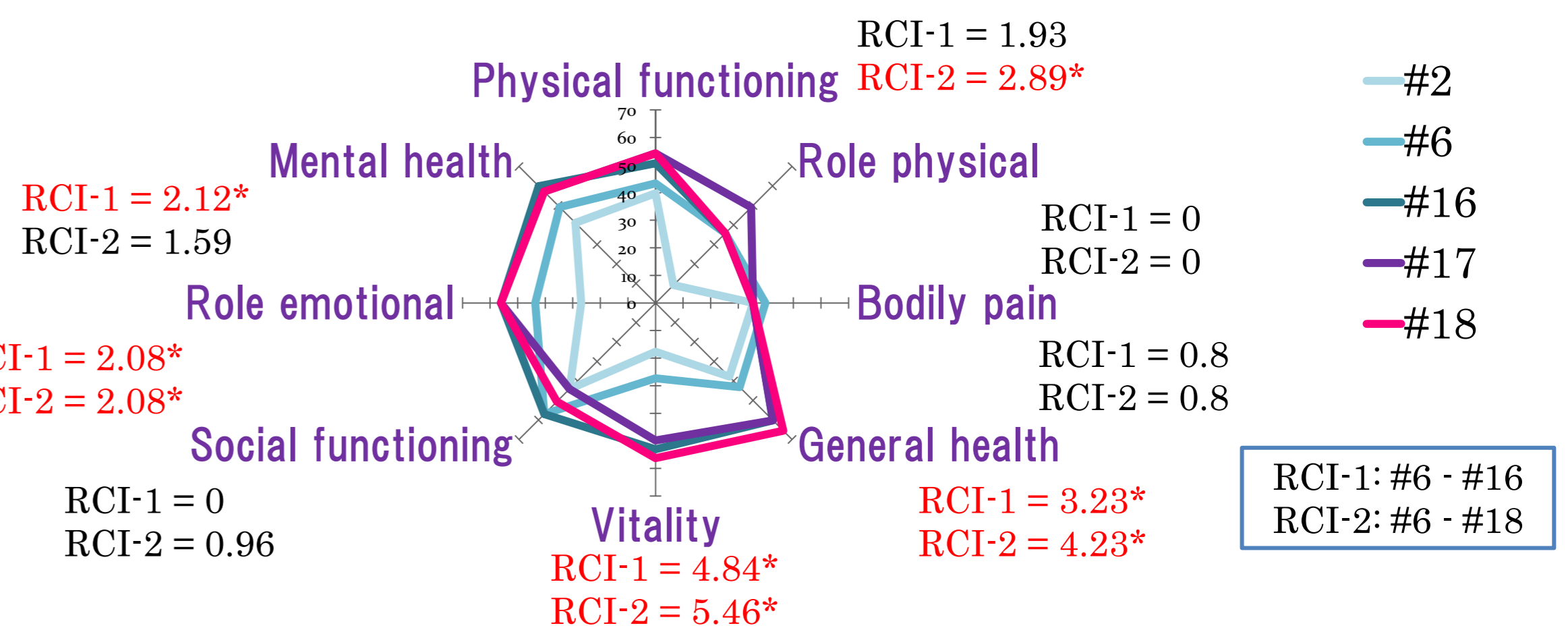


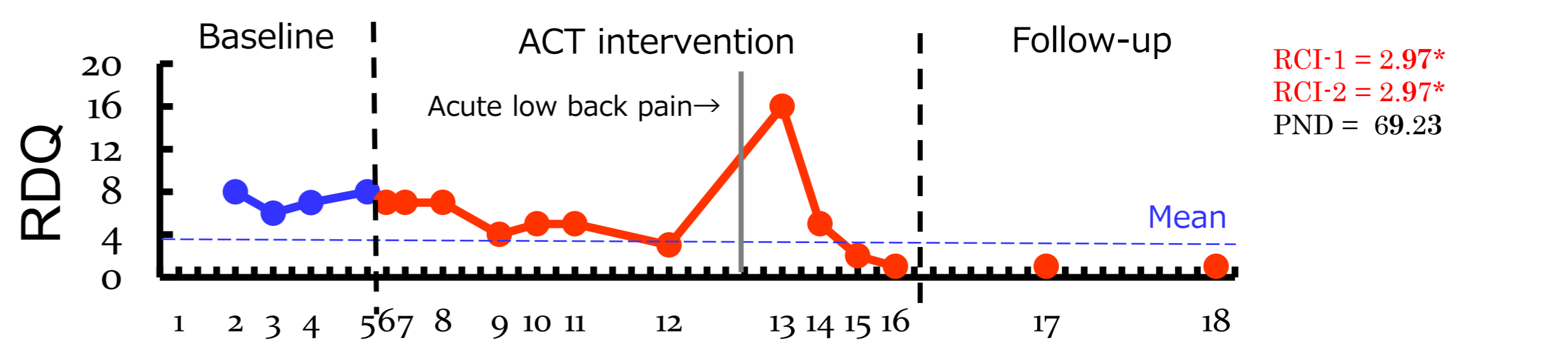
Fig. 1 The cumulative record of valued actions from the start of the ACT program to the 4-month follow-up.

Note. The vertical line shows the variety of valued actions of participant and the horizontal one shows the days and the number of weeks required for each action. The number in black or gray shading indicates frequency of valued action participant carried out in that week.

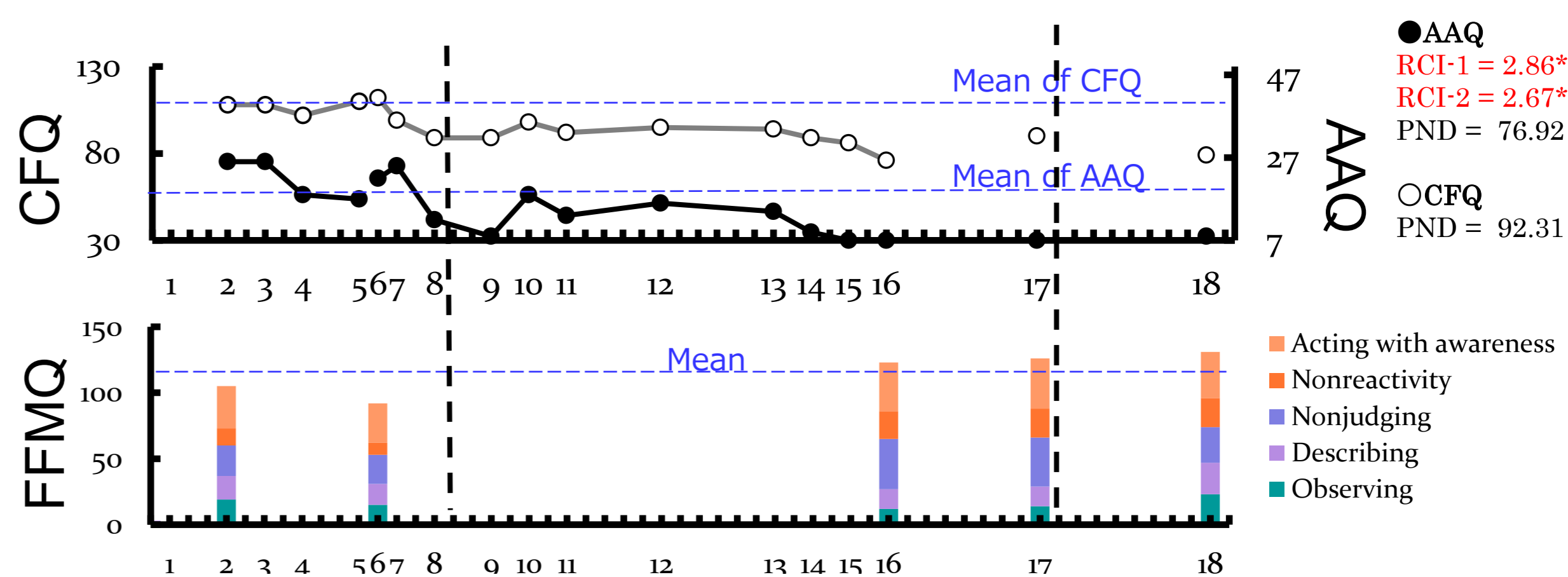
Medical Outcome Study Short Form 36 (SF-36)



Roland-Morris Disability Questionnaire (RDQ)



Process measures (AAQ, CFQ, FFMQ)



Conclusion

The ACT treatment program used in this case study may have helped this participant who had chronic low back pain by weakening the influence on her behavior, exerted by her thoughts or feelings associated with pain, and by improving her functional performances. Future research should identify the factors that maintain an increase in the effectiveness of ACT interventions.