

Brief ACT Training for Human Service Professionals in Japan

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Background: This study investigated the effects of participating in a brief acceptance and commitment therapy (ACT) workshop on the acquisition of knowledge and skills and on the mental health status of the participants. Teachers and staff working with children with disabilities and their parents can study ACT skills and then teach mindfulness and other beneficial skills. Teachers and staff working with children with disabilities may also have their own mental health challenges. Studying ACT, thus, could benefit them personally as well. **Methods:** Thirty-eight participants attended an ACT workshop. They work with children with disabilities and their parents as either the nursery school teacher, or the staff of a supporting agency (public or private agency). Twenty-seven of the participants provided written informed consent agreeing to take part in the study and returned the data, and they were divided into two groups: the experimental group (N = 12) and the wait list control group (N = 15). Six questionnaires, the Acceptance and Action Questionnaire (AAQ-II), Beck Depression Inventory-II (BDI-II), General Health Questionnaire-28 (GHQ-28), Five Facet Mindfulness Questionnaire (FFMQ), Cognitive Fusion Questionnaire (CFQ), and a quiz were used to assess the effectiveness of the workshop. The workshop was conducted in a group format, and it lasted for one five-hour session. **Results:** Univariate Analysis of Covariance (ANCOVA) revealed there was no significant difference between the experimental and the wait list group except for their fusion scores. The results showed that participants' skills and knowledge increased after having participated in the ACT workshop, and their mental health status improved. However, it was unclear whether the workshop contributed to the improved mental health status. **Discussion:** The effectiveness of the current brief ACT training workshop in teaching the knowledge and skills of ACT and in improving participants' mental health status might not have been sufficient to do that. A support system, such as an internet-based program would likely be necessary to help maintain the effects and encourage the provision of ACT training.

Key Words : children with disabilities, ACT knowledge and skills, ACT, Brief ACT training, human service professionals

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I. Background

Public agencies, private hospitals and institutes, and schools are at the frontline of services for children with disabilities and their families in Japan. These organizations are entrusted by the Japanese government with providing services, including training and rehabilitation, for children with disabilities. A person working in there was referred as a direct care staff or a human service professional. They are also mandated to provide consultation, social services information, and parent training for the parents of disabled children.

There are two advantages of learning ACT for a direct care staff. First, ACT is an empirically supported treatment. The amount of research showing the effectiveness of ACT for improving the mental health of children with disabilities and their parents is increasing (Blackledge & Hayes 2006; Hwang & Kearney 2013; Pahnke et al. 2014; Tani et al. 2013; Sugano & Tani 2013). If direct care staff learn ACT and use its principles and protocols, many disabled children and their parents would likely benefit. Additionally, ACT is an effective technique to foster self-care for direct care staffs and social service professionals such as a social workers, consultants, psychologists, and teachers. In an ACT perspective, human suffering is based on language and cognition which human has been learning since his birth. Therefore, Human sufferings, such as anxiety, shame, and depressions, are considered as normal events everyone experiences. Learning ACT as a direct care staff will promote the understanding of the power of language, and help him to go forward to his valued life.

Imagine a direct care staff who is learning ACT. He learns a value exercise so that he could provide for his client. In practicing the exercise, he explores his own value, and he will be encouraged to do valued actions in his daily life even in negative feelings and thoughts. This practice also could be useful for his self-care.

The Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT 2017) has reported that the rate of teachers leaving their employment because of mental health issues has been increasing since 1999. Mori & Tanaka (2012) investigated the mental health of teachers working at special education schools and found that 63% of their study participants showed above cutoff scores on the GHQ-28. 佐藤・中嶋 (1995) reported that 14.1% of the staff working with people with disabilities showed burnout, and 35.6 % showed signs of burnout. 堀口他 (2000) also reported 45.8% of the staff caring for the disabled were in a condition of burnout.

Mindfulness and acceptance skills are beneficial for fostering self-care for human service professionals (Shapiro et al. 2007). Mindfulness-based training has been shown to effectively improve teachers' mental health, resilience, self-efficacy, and physical health (Jennings et al. 2014; Meiklejohn et al. 2012; Poulin et al. 2008). Pakenham (2017) also insisted on the advantages of ACT for cultivating self-care. ACT is based on relational frame theory (RFT), which hypothesizes that human suffering is created by getting overly caught up in our ordinary processes of language and cognition.

ACT is an experiential therapy that cultivates

psychological flexibility not only for the client, but for the therapist as well (Luoma et al. 2007). The purpose of ACT is to increase psychological flexibility, defined as “the ability to be in the present moment with full awareness and openness to our experience, and to take action guided by our values (Harris 2009).”

There have been some studies to investigate how psychological flexibility contributes to mental health. A systematic review by Rudaz et al. (2017) noted that ACT tends to improve psychological flexibility and mindfulness for those trained in it relative to the controls. It also reduces stress and stigmatizing attitudes.

Brinkborg et al. (2011) examined the effects of an ACT stress management intervention program for social workers. The program consisted of four sessions of three hours each, provided every other week. A randomized wait list control design was used. After intervention, perceived stress of the ACT group was significantly less than that of the control group. The score of the General Health Questionnaire (GHQ) was also decreased in the ACT group. The Acceptance and Action Questionnaire-II (AAQ-II) was used as the process measure in the research. There was no difference between the ACT group and control group in terms of overall scores for the AAQ-II, but a moderately significant correlation was found between the scores on the AAQ-II and the perceived stress category and on the GHQ. Psychological flexibility was correlated with stress (Bond et al. 2011).

In order to develop a useful ACT training program, it is necessary to show what a participant attending the program will have

learned from the program. There are six core processes in ACT: defusion, acceptance, self as process, now and the present moment, value, and committed action. Each of the core processes is related, and they enhance the psychological flexibility (Hayes et al. 2012).

Some studies have examined the processes of ACT that contribute to the improvement of psychological flexibility. Stafford-Brown & Pakenham (2012) and Pakenham (2015) have examined the process of ACT training for clinical psychology trainees on stress management and on developing the qualities of a clinical psychologist. The 16-item Acceptance and Action Questionnaire (Bond & Buce 2003) was used to assess psychological flexibility. The 39-item Five Facet Mindfulness Questionnaire (Baer et al. 2006; FFMQ) was implemented to measure the processes of mindfulness related to multiple core processes in ACT, including acceptance, self as process, and now and the present moment. The researchers also used the Value Living Questionnaire (Wilson et al. 2010; VLQ) to assess the values process after presenting one three-hour ACT session per week to participants for four consecutive weeks. Professional self-doubt and psychological distress were significantly improved in the trainees' group compared to the control group. The scores for the process measures for ACT—the 16-item AAQ, the FFMQ, and the VLQ—were increased significantly. The score of thought suppression, which was measured by the White Bear Suppression Inventory (Wegner & Zanakos 1994; WBSI), was decreased after intervention. These results were maintained through the follow-up. By using mediational analysis, the researchers showed that the

mindfulness and acceptance process mediated the outcomes.

Pakenham (2015) provided one two-hour ACT training session per week for 12 consecutive weeks to postgraduate clinical psychology trainees. Results showed that there was no difference in stress measures between the ACT training group and the control group. However, significant differences were found in measures of therapeutic skills and ACT process measures, including psychological flexibility, mindfulness, and value. Pakenham (2017) also investigated the effects of self-care in clinical psychology trainees in an ACT university course from 2011 to 2013. All participants indicated they found the course helpful in fostering self-care. The results showed that self-care improvement was related to the six ACT processes.

It is important to use the process measurements to show what the participants learned in their ACT training. However, these are still under development in Japan. The AAQ-II and FFMQ were confirmed to be valid and reliable, but the VLQ has not yet been validated. The Cognitive Fusion Questionnaire (Gillanders et al. 2009; CFQ) assesses cognitive fusion, which is one of the six core processes of ACT. The Japanese version of the CFQ was developed by Shima et al. (2016) to validate the Japanese version of the CFQ.

Consideration of length of time and frequency is important in developing an ACT training program for a direct care staff and human service professionals, as they already have a heavy workload, and it is undesirable for the program to be burdensome to them. The length of time that participants spent in ACT

training sessions for previous studies was often longer than in the current study. For example, the training lasted 12 hours (four three-hour sessions) in the Stafford-Brown and Pakenham (2012) study, 24 hours (12 weekly two-hour sessions) in the Pakenham (2015) study, and 12 hours across four days in the Brinkborg et al. (2011) study. In Japan, working conditions are so constrained that direct care staff and human service professionals would not be able to spend as much time in ACT training as in the previous studies. In addition, it is likely that they would have to attend a workshop or seminar after finishing a full day of work and pay out-of-pocket for the tuition. Therefore, to increase attendance and reduce the impact on staff timetables, it would be important to offer ACT training for personnel in Japan in the form of a one-day workshop held over the weekend.

II. Purposes

One purpose of the current study was to develop a brief ACT program wherein teachers and other staff working with children with disabilities could learn ACT knowledge and skills. In addition, the study was also set up to explore the effectiveness of the ACT training program for improving the mental health status of the participants.

III. Methods

1. Recruitment

Participants were recruited via a leaflet that described the purpose and outline of the ACT training workshop. The leaflet was distributed by a local council in the Kanto area in Japan to

schools, human service offices (developmental support for the disabled center and city center). An informed consent form was sent to 38 people who registered for the workshop, and 35 of those people provided written consent. Three people did not participate in the workshop. Five participants attending the workshop did not return their Time 2 and Time 3 responses. Therefore, only the data from the remaining 27 participants were used.

All participants worked with children with

disabilities and their parents as either the nursery school teacher, or the staff of a supporting agency (public agency or private agency). Table 1 provides the demographic information of the participants. The average age was 42 years old (ages ranged from 22 to 60 years old). The mean of participants' years of experience working with children with disabilities was 8.47 years (the range was from 0 to 23 years). Only one participant had less than a year's experience (Table 1).

Table 1. Demographic information on participants

	All (<i>N</i> = 27)	Experimental Group (<i>N</i> = 12)	Wait list control Group (<i>N</i> = 15)
Age (in years)			
Minimum	22	25	22
Maximum	60	60	59
Mean	42.3	45.17	40
Std.	12.21	10.69	13.2
Missing	-	-	-
Teaching experience (in years)			
Minimum	0	3	0
Maximum	23	23	21
Mean	8.47	11.5	6.3
Std.	6.9	6.59	6.48
Missing	3	2	1
Sex			
Male	4	1	3
Female	23	11	12
Education			
High school	3	1	2
Vocational college	7	3	4
Junior college	4	3	1
University	13	5	8
Work			
Nursery teacher	4	2	2
Public agency	7	2	5
Private agency	2	1	1
Other	14	7	7
Knowledge of ACT			
None	21	9	12
Conference	3	2	1
Classes	3	1	2
Knowledge of Behavior Analysis			
None	19	7	12
Reading knowledge	4	2	2
Conference	4	3	1
Classes	3	1	2

The participant was informed to be grouped randomly and attend either the experimental group or the wait-list control group. However, randomized allocation of participants was not conducted because of the participants' limited schedules. Some participants answered to be available only one or the other. Therefore, they were assigned into their available time-schedule group, and others were assigned by quasi-randomization. Participants were grouped into the experimental group (N = 12) or the wait list group (N = 15). The chi-square test and the t-test showed no difference between the two groups in terms of demographic data. Some participants had a reading knowledge of ACT or had attended a conference or a university class on ACT.

2. Experimental Design

A wait list comparison design was used to evaluate the effectiveness of the workshop. Figure 1 illustrates the experimental timetable. After two baseline assessments (Time 1 and

Time 2) were finished, the participants in the experimental group attended the ACT training workshop. The post assessment (Time 3) was conducted for both groups when the workshop was finished. The wait list group participated in the second iteration of the workshop one week after the experimental group. The Time 4 test was provided only for the wait list group. The workshop was on a single day and lasted for five hours, using a group format. A follow-up test was conducted three months after the wait list group workshop was finished.

3. Measurements

This study was used to instruct participants in the skills and information of ACT. The ACT has six core components; acceptance, defusion, now and the present moment, self-as-context, value, and commitment. The assessment tools that assessed self-as-context and values were under development in Japan at the time that this investigation was conducted and thus, could not be used. Skills and knowledge related

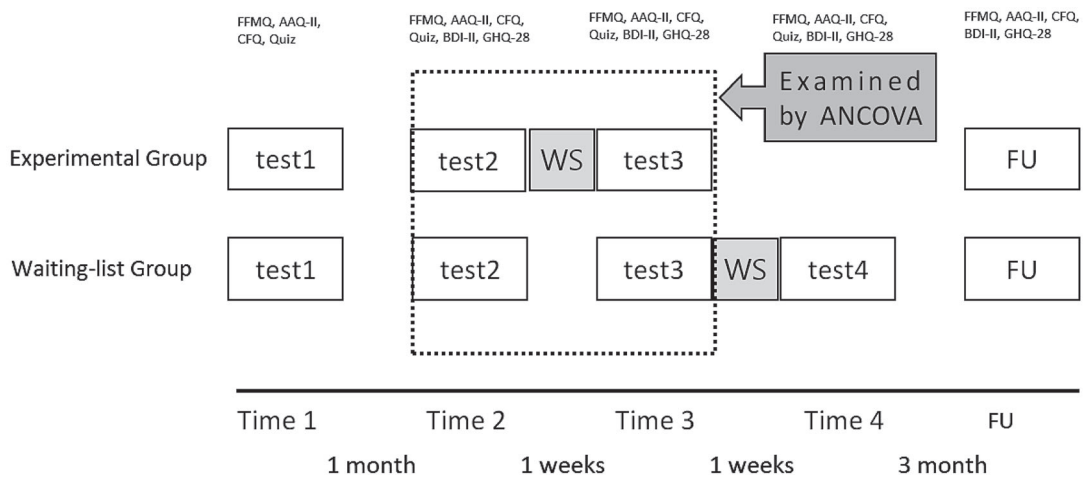


Figure 1, Experimental timetable and measurements used for each test point.

Note: WS indicates workshop, FU indicates follow-up.

to self-as-context, values, and commitment were not evaluated. The following four measures were used to assess the effectiveness of the workshop:

AAQ-II

AAQ-II was used to assess psychological flexibility. The Japanese version of AAQ-II (Shima et al., 2013) is a seven-item self-report scale. Higher scores indicate less psychological flexibility/greater experiential avoidance. This measure has demonstrated internal consistency (Cronbach's $\alpha = .88$) and concurrent validity with the Japanese version of the Rumination-Reflection Questionnaire (RRQ: $r = .596, p < .01$), the Japanese version of the Penn State Worry Questionnaire (PSWQ: $r = .643, p < .01$), and the Japanese version of the Behavioral Activation for Depression Scale ($r = -.516, p < .01$).

Quiz

A quiz for ACT was developed by the first author (ST). The quiz was consisted of 20 questions (yes/no/I do not know) on basic knowledge regarding ACT (Appendix 1). The possible total score ranges from 0 to 20.

CFQ

CFQ was also used to evaluate the cognitive fusion of participants. The Japanese version of the 13-item CFQ consists of two factors (Shima et al., 2016). Factor 1 (cognitive fusion) showed high internal consistency (Cronbach's $\alpha = .92$). Factor 2 (defusion) had moderate internal consistency ($\alpha = .68$). Shima et al. (2016) found that Factor 1 had a moderately significant correlation with AAQ-II scores ($r = .67$). Factor 2 had a weak correlation with some FFMQ

subscales (observing, $r = .23, p < .01$; describing, $r = .20, p < .01$), with activation ($r = .22, p < .01$), and with undermining catastrophic thinking ($r = .37, p < .05$) on the Behavioral Activation for Depression Scale.

FFMQ

The Japanese version of the FFMQ is a 39-item self-reported inventory that is rated on a 5-point scale from 1 (never or very rarely true) to 5 (very often or always true). The Japanese version of the FFMQ and the original FFMQ share the same structure, and the former has good internal consistency (total; $\alpha = .80$, subscale; 0.67-0.85) and reliability (Sugiura et al. 2012).

Participants from the experimental group were tested at Times 1, 2, 3, and a 3-month follow-up. The wait list group participants were tested at Times 1, 2, 3, 4, and at a 3-month follow-up. The quiz was not conducted at the follow-up period. Two self-reported measures were used to assess participants' mental health status. BDI-II (Beck Depression Inventory-II Japanese version) and the GHQ-28 (Japanese version) were conducted on both groups at Times 2, 3, at follow-up, and for the wait list group only at Time 4.

BDI-II

The Japanese version of BDI-II was used to measure depressive symptoms. BDI-II is a 21-item self-reported inventory. The Japanese version of BDI-II has high reliability, content validity (Kojima et al. 2002), and sensitivity to between-subject differences and subject changes (Hiroe et al. 2005).

GHQ-28

The Japanese version of the GHQ-28 is a widely used, reliable, and valid self-administrated screening test to detect psychiatric disorders. The 28-item Japanese version has four subscales: Somatic Symptoms, Anxiety and Insomnia, Social Dysfunction, and Severe Depression (Nakagawa & Daibo 1985).

The questionnaires were posted to the participants. They filled the questionnaires and sent to the second author by postal mail.

4. Materials

The textbook and PowerPoint slides on ACT training for parents from previous studies (Tani et al. 2013; Sugano & Tani 2013) were revised for use in the current research. The training workshop was structured to allow the participants an opportunity to study the six core processes of ACT. The workshop was conducted in a small-group format, with five to six members to a group. Participants went through the ACT exercises and then shared their experiences with each other. The facilitator and one assistant encouraged the participants to keep an open mind to the exercises and enjoy them while sharing their own experiences.

Section 1: Introduction of ACT

The participants were taught that ACT was intended to enhance psychological flexibility, which is defined as “the ability to be in the present moment with full awareness and openness to our experience and to take action guided by our values” (Harris 2009). By using the Mountain Metaphor, the facilitator encouraged the participants to notice that the

role of a supporter is to accompany a person who is suffering as a colleague. The participants explored their own values reflected in supporters. They were taught basic knowledge of RFT. Through exercises such as *Tug of War* (Hayes et al. 2012), *Chinese Handcuffs* (Eifert & Forsyth 2005), and *What’s the Number?* (Hayes et al. 2012), they learned that the mind is created from relational responses and that trying to undermine, distract, or suppress our mind often does not work in the long term.

Section 2: Creative hopelessness

Participants explored the workability of the behaviors often used for coping with anxiety, fear, and struggle. The exercises, *Tug of War*, *Floating Sand* (Hayes et al. 2012) and *Apple*¹⁾ were introduced to show the ineffectiveness of coping behaviors intended to do away with struggle (experiential avoidance).

Section 3: Doing nothing

To take the place of experiential avoidance, mindfulness was introduced. The skills of being aware, observing, and describing one’s thoughts and feelings were practiced through guided meditation. Through mindfulness, the facilitator and an assistant helped participants be in the present moment and notice the ongoing changes in their thoughts and feelings.

1) This exercise was introduced by Giovanni Misselli at his workshop held in Kyoto 2014. The purpose of the exercise is to notice the difficulty of controlling your thought. A participant is instructed to hold a something in his hand and not to think about it. Then the therapist instructs him to walk around freely while he does not think about it. After a few minutes-practice, the therapist instructs him to walk around again while he does think about it.

Section 4: Keeping language at a distance

In this section, defusion exercises such as *Reason Giving Exercise*²⁾, *Red Traffic Signal*³⁾, *Milk Milk Milk*, and *Physicalizing Exercise* (Hayes et al. 2012), were introduced to the participants, who learned ways to maintain a distance from the contents of their thoughts. Using the mindfulness and defusion exercises, the facilitator guided the participants in being in the present moment and noticing ongoing changes in their thoughts and feelings to a greater degree.

Section 5: Values

The *Skiing Metaphor* (Hayes et al. 2012) and the exercise *Value Cards Sorting* (Miller et al. 2001) were used to explore participants' values. They discussed about their personal values each other. They learned that values clarify what direction one chooses to go in one's life, and that the discrimination between goals and values.

Section 6: Commitment

Participants wrote what mattered to them and what actions they took to follow paths that espoused their values. They shared their

- 2) This exercise is developed by the first author (ST), and used for promoting defusion. A participant chooses any three numbers and selects the correspondent words written in a sheet. He makes a sentence by using these three words. Then he is requested to explain the sentence he made. A therapist helps him to notice that a reason-giving would be one of fusion.
- 3) This exercise is developed by the first author (ST). The purpose of the exercise is to promote defusion. A participant is asked about the meaning of red traffic signal. Then he is asked again whether he could walk across the street at the red signal at midnight. A therapist helps him to notice that he could do beside what his thought tells.

values and actions with the other participants.

5. Facilitator

The facilitator encouraged the participants to attend group study and perform exercises. The facilitator had over 30 years of clinical experience with children with disabilities and their parents and worked as an ACT therapist in Japan. The facilitator helped prepare a web page for the participants to obtain information related to ACT (books and papers published in Japan) and the present study, including the PowerPoint slides used in the workshop.

6. Follow-up investigation

The questionnaires that had been distributed during the workshop, with the exception of the knowledge test, were sent to participants who had finished the workshop, including the wait list group. An additional five questions were added to evaluate participants' satisfaction with the workshop:

- Was the workshop useful for your work?
- Would you want to attend the same workshop again?
- Would you recommend a workshop like this to your colleagues or friends?
- Do you think the length of the workshop was appropriate?
- Are you satisfied with the workshop?

The participants responded using a 5-point Likert scale (1-5), from strongly disagree to strongly agree. An additional question on what each participant learned in the workshop, was also asked.

7. The missing data process

The null hypothesis of the study is that the

workshop would not have an effect on the ACT knowledge and skills of participants. In order to avoid type I error, the missing data were replaced with the last observed value from the same participant (Hamer & Simpson 2009). As one participant's data from the FFMQ from Time 2 were missing, these data were imputed from the Time 1 data of that participant. One participant did not return Time 2 data, and Time 1 data were used as Time 2 for the statistical analysis. One participant in wait list control group gave all data except for Time 4 (after WS), and her data were imputed by Time 3 data (before WS).

IV. Results

1. Baseline

In this study, two pre-tests (Test1 and Test2) were conducted as a baseline. A paired sample t-test showed that a significant change between Test 1 and Test 2 was found in the experimental group for the FFMQ section on describing ($t = 2.96, df = 10, p < .01$) and on the knowledge test ($t = -3.32, df = 10, p < .01$). In the control group, observing ($t = 2.24, df = 12, p < .05$) and nonreactivity ($t = -2.50, df = 12, p < .03$) changed significantly from the baseline.

2. Effects on the quiz of ACT

Univariate ANCOVAs were conducted to compare the differences between the groups for Test 2 and Test 3, controlling for teaching experience and Test 2 scores as covariates (Table 2). Univariate ANCOVA revealed only the scores of fusion factors significantly decreased after the workshop ($F[1, 25] = 5.10, p$

$= .03$). As the significant interaction between the "Acting with awareness" score and the covariate was found, an ANOVA as well as an ANCOVA was used. The ANOVA revealed there was no significant interaction between the intervention and control groups ($F[1, 25] = 1.56, p = .22$). Although there was no significant group difference, the scores of the AAQ-II and fusion tests were decreased, and the scores of other measurements were increased, as expected, after WS.

Univariate ANCOVAs were also conducted to show effects on the mental health status of the participants. Univariate ANCOVA showed that the scores on both BDI-II and the GHQ-28 decreased after the workshop. However, group differences were not significant on BDI-II scores ($F[1, 25] = 2.10, p = .14$) and the GHQ-28 ($F[1, 25] = .48, p = .50$).

3. Follow-up

The same questionnaires, with the exception of the knowledge test, were sent to participants who had finished the workshop, including the wait list group. However, only nine participants (37.5%) returned questionnaires at follow-up. A t-test was conducted to compare Test 3 for the experimental group scores (Test 4 for the wait list control group) with follow-up scores (Table 3). The scores for observing and nonjudging at follow-up increased significantly from Test 3 for the experimental group and Test 4 for the wait list group; observing ($t = -2.29, df = 8, p = .02$), nonjudging ($t = -3.08, df = 8, p = .02$). The fusion scores were decreased from post-test to follow-up ($t = 2.59, df = 8, p = .03$). There were no significant differences between Test 3 for the experimental group,

Table 2. Means and SDs for each measurement in three test points

Group		Test1	Test2	Test3
		<i>Mean (SD)</i>	<i>Mean (SD)</i>	<i>Mean (SD)</i>
AAQ	Exp.(N=12)	19.42(5.37)	18.75(5.31)	18.67(6.15)
	Controls (N=15)	20.13(7.81)	20.20(4.09)	18.53(7.48)
FFMQ				
Observing	Exp.(N=12)	23.17(4.41)	23.83(5.39)	26.33(4.60)
	Controls (N=15)	21.73(3.28)	20.2(4.09)	22.33(3.90)
Nonreactivity	Exp.(N=12)	23.67(5.33)	23.75(3.84)	24.92(5.38)
	Controls (N=15)	20.73(4.77)	21.73(3.73)	22.93(4.85)
Nonjudging	Exp.(N=12)	26.33(3.60)	26(3.83)	27.58(4.56)
	Controls (N=15)	27.53(6.60)	27.73(5.92)	27.53(7.01)
Describing	Exp.(N=12)	25.17(5.31)	23.5(4.46)	24.17(4.90)
	Controls (N=15)	24.67(4.62)	25.6(4.19)	26.07(5.61)
Acting with awareness	Exp.(N=12)	29.08(4.44)	27.33(4.56)	28.17(2.66)
	Controls (N=15)	28.33(4.76)	29.47(5.95)	28.87(5.97)
CFQ				
Fusion	Exp.(N=12)	26.83(10.43)	27.42(9.03)	24.25(9.28)
	Controls (N=15)	25.93(11.16)	27.13(9.16)	28.80(10.86)
Defusion	Exp.(N=12)	13.83(4.37)	14.33(3.92)	13.33(5.61)
	Controls (N=15)	15.53(4.69)	16.73(4.06)	15.53(4.76)
Quiz	Exp.(N=12)	5.75(4.52)	9.92(4.74)	13.33(4.52)
	Controls (N=15)	8.26(3.91)	8.6(4.12)	11.07(3.58)
GHQ-28	Exp.(N=12)		4.67(4.16)	3.83(3.01)
	Controls (N=15)		4.6(3.72)	4.33(3.70)
BDI-II	Exp. (N=12)		8.6(8.47)	5.33(5.99)
	Controls (N=15)		7.27(6.65)	6.13(5.42)

Note: The workshop was presented the experimental group between Test 2 and Test 3.

Table 3. Paired Samples Test (between Test 3/Test 4 and follow-up)

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	95% Confidence Interval of the Difference Upper	<i>t</i>	<i>df</i>	Sig. (2-tailed)
AAQ-II		0.44	4.07	1.36	-2.68	3.57	0.33	8	0.75
FFMQ	Observing	-2.56	2.65	0.88	-4.59	-0.52	-2.89	8	0.02 *
	Nonreactivity	-2.78	5.07	1.69	-6.67	1.12	-1.64	8	0.14
	Nonjudging	-4.22	4.12	1.37	-7.39	-1.06	-3.08	8	0.02 *
	Describing	-1.33	4.00	1.33	-4.41	1.74	-1.00	8	0.35
	Acting with awareness	-2.78	5.47	1.82	-6.98	1.43	-1.52	8	0.17
CFQ	Fusion	4.89	5.67	1.89	0.53	9.24	2.59	8	0.03 *
	Defusion	1.67	6.67	2.22	-3.46	6.79	0.75	8	0.48
GHQ-28		-1.11	4.81	1.60	-4.81	2.58	-0.69	8	0.51
BDI-II		0.63	5.93	2.10	-4.33	5.58	0.30	8	0.77

Note: * indicates $p < .05$

Test 4 for the wait list group, and for the other measures in the follow-up. This underscores that the effects of the workshop continued or were maintained at three months.

4. Social validity

Five questions were asked to evaluate participant satisfaction with the workshop in the follow-up investigation. The mean score for each question was above 4 (almost agree), ranging from 4.22 to 4.78. The participants evinced satisfaction with the workshop and praised its usefulness.

5. Practice in daily work

At follow-up, all nine responders wrote that they continued to practice the mindfulness exercises. Five participants said that they used some of the exercises and metaphors learned in the workshop to assist their clients to be in the present moment or maintain distance from certain thoughts or feelings.

V. Discussion

This study had two main purposes. One was to investigate the usefulness of a workshop program in teaching ACT skills and knowledge, and the other was to explore the effectiveness of the workshop on the mental health issues of participants. Looking at the usefulness of the workshop, each process had a fundamental role in building up the participants' psychological flexibility. Although all of six of the ACT core components were taught in the workshop, only three measurements were used in the assessments. The FFMQ was used to assess the skills of acceptance and flexible attention to

the present moment, the CFQ was intended to evaluate the processes of fusion and defusion, and the AAQ-II was used to measure psychological flexibility/ experiential avoidance.

Univariate ANCOVA revealed that the scores of all the measurements, except fusion, were not significant between groups. Although scores of all measurements changed in the expected directions after the workshop in the experimental group, the scores of the wait list control group also changed in the same direction during waiting period. It is considered as the reason that Univariate ANCOVA failed to show the group difference.

The participant's knowledge and skills of in ACT increased, but it was difficult to say with certainty whether the workshop provided in the current study contributed to it. One possible reason was the length of the workshop. In the current study, one-day-long five-hour workshop was presented. That might not have been enough time to master the information. It is strongly possible that ongoing sessions or follow-up supports using the internet (Meiklejohn et al. 2012) or phone conversations (Luoma & Vilardaga 2013) should be included with the ACT workshop program. Although home pages were prepared for study participants so that they could utilize the additional information and materials for the continuing education, it was not clear how they are useful and helpful for participants.

Another possible reason for no clear-cut results was that the effects of workshop might need to be followed over a longer time span. Only nine participants gave follow-up data and comments about their subsequent daily practices. The comparison between the pre-test

data (Test 2) and follow-up data revealed two subscores of the FFMQ, observing ($t=-3.23$, $df=8$, $p=.01$) and nonjudging ($t=-4.63$, $df=8$, $p=.01$), and two subscores of the CFQ, fusion, ($t=4.95$, $df=8$, $p=.01$) and defusion ($t=2.50$, $df=8$, $p=.04$) showed significant statistical differences. The correlation between scores for non-reaction ($t=-2.00$, $df=8$, $p=.08$) and the GHQ-28 ($t=-1.96$, $df=8$, $p=.09$) were marginally significant. The fact that only 37.5% participants (nine participants) provided follow-up data is somewhat problematic as well and may account for less significance in the data.

The effects of the ACT workshop also might develop only slowly, and daily practice would be needed to enhance psychological flexibility. Designing the study so that the period between the end time of the experimental group testing and the start time of the wait list group is longer would likely ensure that the effect of workshop would be clear even if the effect had a delayed onset.

No effects were found in psychological flexibility (AAQ-II). Increases in therapists' psychological flexibility due to ACT have been found to occur consequent to the ongoing practices of exercises (Luoma et al. 2007). Luoma & Vilardaga (2013) provided two or two and a half-day ACT workshops and six individual phone consultations with therapists and students. They found that psychological flexibility (as measured by AAQ-II) improved over time in the group that had a workshop plus an individual consultation but not in the workshop-only group. Rudaz et al. (2017) reported that three studies found an increase in AAQ-II scores after ACT training for

professionals. These three studies offered ACT training that lasted for several weeks or months (Luoma & Vilardaga 2013; Pakenham 2015; Stafford-Brown & Pakenham 2012). It might be necessary for the program to include a section that promotes the continuous practice of exercises.

Score of the quiz of the experimental group was greater than those in the wait list control group after the workshop. The effects of the workshop on the quiz were not significant between groups. The quiz was developed by one of the authors (ST) for the purposes of the current study. However, neither the validation nor the internal consistency of the test was examined. For future research, it might be useful to use an ACT-specific quiz, such as that of Richards et al. (2011).

The second purpose of the current study was to examine the effect of the workshop on the participant's mental health. ANCOVA could not find a significant difference between two groups in both scores of BDI-II and GHQ-28. But, scores of BDI-II and GHQ-28 in both groups decreased after the workshop, and the score maintained for three months after workshop. These results lead to the conclusion that the mental health status of the participants got better after the workshop, and it was uncertain whether workshop contributed to the change of mental health status.

There are some limitations to this study. The assessment tools that assessed self-as-context and values were under development in Japan at the time that this investigation was conducted and thus, could not be used. Skills and knowledge related to self-as-context, values, and commitment were not evaluated.

Future research should assess all of the six core processes of ACT.

Only nine participants provided follow-up data, and this small sample was insufficient to show middle-term and long-term effectiveness.

The ultimate purpose of the experimental setup was to help participants to be able to receive ACT training in their daily work with parents of children with disabilities. Although the follow-up investigation was intended to evaluate this possibility, the data provided were too few.

Conclusion

The effectiveness of the current brief ACT training workshop in learning the knowledge and skills of ACT and in improving participants' mental health status was not definitively demonstrated by this study. However, the results are suggestive, and a support system such as an internet-based program (Lappalainen et al. 2014; Räsänen et al. 2016) should be used in future studies to determine whether the effects from the provision of ACT training can be maintained and used to help parents of children with disabilities and the professionals who work with them and their children.

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Appendix

Knowledge Test

1. Our mind, such as Human suffering or anxiety, is considered to be a relational response by language. (Yes/No/IDN)
2. It should be important to remove suffering and anxiety. (Yes/No/IDN)
3. Our judgment, such as right/wrong is an arbitrarily related response. (Yes/No/IDN)
4. Reason-giving is related response by language. (Yes/No/IDN)
5. Appropriate judgment and reason-giving work for alleviating sufferings and anxiety. (Yes/No/IDN)
6. Creative hopelessness is motivated you to stop a behavior does not work, and to do behaviors you have never done. (Yes/No/IDN)
7. A relational network expands without a direct learning. (Yes/No/IDN)
8. A relational network often promotes avoidance behaviors. (Yes/No/IDN)
9. Mindfulness means you think nothing. (Yes/No/IDN)
10. Mindfulness skill includes observing and describing own thoughts and emotions. (Yes/No/IDN)
11. You learn the way of treating your thoughts and emotions effectively in a practice of mindfulness. (Yes/No/IDN)
12. Mindfulness practice includes a skill of judging the goodness of your thoughts and emotions.

(Yes/No/IDN)

13. Our thoughts and emotions are ongoing changing depend on the context. (Yes/No/IDN)
14. Mindfulness skills are acquired thorough every day practice. (Yes/No/IDN)
15. Mindfulness practice, such as Zazen or meditation, should be conducted by a Zen master in Zen Dojyo. (Yes/No/IDN)
16. The purpose of ACT is to expand the valued behaviors even if there is unpleasant mind. (Yes/No/IDN)
17. The value clearness is to identify the object of

your life. (Yes/No/IDN)

18. Sometimes you find your value in different fields of life. (Yes/No/IDN)
19. The one of value is to alleviate or remove sufferings and pains. (Yes/No/IDN)
20. To keep doing valued behaviors often faces to expose sufferings and pains. (Yes/No/IDN)

Note: Underline indicates the correct answer.

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原著論文

Brief ACT Training for Human Service Professionals in Japan

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背景 本研究は、アクセプタンス&コミットメント・セラピー (ACT) の短期ワークショップへの参加が ACT の知識と技術の習得と参加者のメンタルヘルスに与える影響を検討している。障害のある子どもとその家族の支援に関わる教師や支援スタッフが ACT の知識と技術を習得し、それを子どもや家族の支援に応用することは、障害のある子どもやその家族だけでなく、支援者自身のメンタルヘルスの向上につながることを期待される。**方法** 38名の参加者がワークショップに参加した。参加者は全員対人援助職 (幼稚園教諭、公的あるいは私的な支援機関の職員) として障害のある子どもやその家族の支援に従事している。参加者は実験群とウェイトングリスト統制群に分けられた。データの提供に同意し、データの提供を行った27名の参加者のデータ (実験群12名、統制群15名) が、ワークショップの効果を検討するために用いられた。6つの質問紙 (AAQ-II, FFMQ, CFQ, 知識クイズ, BDI-II, GHQ-28) が用いられた。ワークショップはグループ形式で、5時間 (1日) 実施された。**結果** ワークショップの参加前後の6つの質問紙の得点の変化を2つの群で比較するためワークショップ前の得点を共変量とした ANCOVA が用いられた。6つの質問紙の得点は、ワークショップ後に予測された方向へ変化した。2つの群の得点の差は、CFQ のフュージョン得点を除いて、統計的に有意ではなかった。**考察** 短期のワークショップの参加は統計的には十分なものではなかった。日常的な練習を支援するような仕組みをプログラムに持ち込む必要があると考えられた。

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