Diffusion of Defusion: A Mixed-Methods Approach to Longitudinally Measure the Implementation of ACT in a Community Mental Health Center.

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Introduction

The research-practice gap in the use of evidence-based practices (EBPs) is a significant concern (Shafran et al., 2009). In community mental health, dissemination and implementation of EBPs traditionally involves a top-down approach in which particular EBPs are specified at the system level by funders or agency administration. Little is known about individual clinician preferences for specific EBPs or attitudes about implementation of new EBPs in agency settings. To address this gap, we surveyed clinicians at our agency to capture their attitudes toward EBPs and measure specific interest and knowledge about Acceptance and Commitment Therapy (ACT). Pliance, counterpliance, and cognitive dissonance were not significant threats because ACT is currently not an official EBP at the agency and all training in and use of ACT is voluntary. Our study was characterized by a "100% willingness" approach in which every component of intervention and data collection was based on voluntary, anonymous participation.

Research Questions

1. How do clinicians view training and implementation of EBPs in the context of a community mental health center?
2. What are clinician attitudes towards ACT as a new, voluntarily-trained EBP in this setting?
3. What are the effects over time of peer group trainings on ACT knowledge, experience, and interest in this setting?

Materials and Methods

Subjects

All clinical staff (interns, therapists, supervisors, and peer specialists) in one local office were invited to participate in anonymous online surveys at two time points with minimal incentives offered. Data were paired through use of pseudonyms managed by non-clinical staff.

*Survey at Time point 1 (**T1**) - January 2016*

Adapted from Long's (2016) pre-post workshop measures:

1) Demographic data
2) ACT Experience & Attitudes
3) ACT Knowledge Questionnaire (AKQ, Luoma & Vilardaga, 2013)
4) Open-ended questions regarding implementation issues of evidence-based practices (EBPs) generally and ACT as an EBP specifically. Qualitative approach based on grounded theory.

*Survey at Time point 2 (**T2**) - May 2016*

1) Demographic data
2) ACT Experience & Attitudes
3) ACT Knowledge Questionnaire
4) Binary Yes/No questions about acceptability and desire for ACT in our clinic.

Intervention: ACT Monthly Training led by Peers

Peer trainers (first and second author) led voluntary 1-hour experientially-focused trainings each month for clinical staff to learn about ACT psychological flexibility processes. Each meeting focused on on one or two of the hexaflex processes.

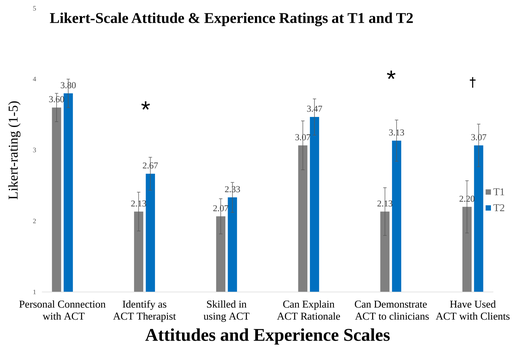
Results

From a population **N**=39 at T1 and **N**=38 at T2, we sampled **n**=22 clinicians at both time points, leading to response rates of 56% and 58%, respectively. Pre-post data were analyzed for 15 clinicians who participated at both T1 and T2. One non-respondent who participates in both clinical teams was excluded to make chi-squared testing between teams possible.

Changes in Confidence in Knowledge were Associated with Group Participation; No Changes in AKQ Performance Observed

15 clinicians with available pre-post measures received an average dose of an additional **0.34 ACT books** read (paired t-test, p=0.025) and an additional **2.2 hours of group training** (paired t-test, p=0.005) during the study period. A *multiple regression* predicting increase in confidence in ACT knowledge (average gain of 0.15 points) with books read and group training as predictors was significant (adjusted R^2=0.43, $F_{2,13}$=5.59, p=0.023). Books read was not significant (coefficient p=0.096), but group training was a significant predictor (coefficient p=0.008), indicating confidence in knowledge was associated with group training. However, performance on the AKQ was not different between T1 and T2 for this group and, in fact, trended toward worse performance (average difference= -0.48%).

Changes in Attitudes and Experience were Associated with Group Participation



Attitudes and Experience Scales

Following the approach of Roberson et al. (1995), we used the sign test to assess for statistically significant changes in paired Likert ratings, and we found significant increases in clinician ratings that they identify as an ACT Therapist (*, p=0.035), that they can demonstrate ACT techniques (*, p=0.002), and marginal significance of an increase in use of ACT with clients (†,p=0.055).

Comparison over time showed some evidence of diffusion but no bias in survey response or willingness to test ACT knowledge as a function of work team or role

T1	*X^2 comparison of survey response rate (N=38)*	**p-value**
	Outpatient vs Child Welfare (*df*=1)	0.013*
	Role (*df*=2)	0.928
	X^2 comparison of participation in knowledge test	
	Outpatient vs Child Welfare	0.449
	Role	0.626
T2	*X^2 comparison of survey response rate (N=37)*	
	Outpatient vs. Child Welfare	0.142
	Role	0.979
	X^2 comparison of participation in knowledge test	
	Outpatient vs Child Welfare	0.150
	Role	0.671

Eagerness (measured as taking the survey at both T1 and T2) did not differ by team or role

Additional chi-squared tests (not shown) revealed no effects of team or role on those who completed the survey both times compared to those who only took it once. Thus, no particular team or type of respondent appears more *eager* to participate.

Qualitative coding of responses to open-ended questions suggested three main themes: Attitudes about EBPs generally, Attitudes about ACT Implementation, and Attitudes about Agency Focus.

Qualitative Data Themes

Attitudes about EBPs generally	**Attitudes about ACT**	**Agency focus**
EBPs need to be easy to implement	Trainers must have practical experience that shows awareness of the realities of agency population	Agency successfully supports EBPs
EBPs need to be proven effective EBPs must fit our clients	Therapists open to learning proven interventions if agency provides adequate support	Agency has other priorities as strong as EBP use
Practices that prioritize the model over doing right by the client are disliked	Experiencing personal success with clients is critical for acceptance	Agency adds demands without removing any expectations
Success is measured by therapist comfort and confidence in using the model	Ongoing training and supervision is important	EBP designation is important since it shows model is endorsed by agency
Clinicians are confident in general about their ability to delivery high quality EBPs	Need sufficient training for full implementation	Priority should be on effectively serving clients – Client focus above all
The major barrier is competing demands on time to meet expectations	Need agency facilitation to reduce barriers	Priority should be on balancing outcomes and therapist self-care (sustainability)
Success is measured by direct, lived experience	Only works if supervisors are committed	Need to find EBP effective for parenting
	Supportive and knowledgeable supervisors are critical to sustain model use	Ongoing training should be a focus
	Any competent trainers are acceptable	
	Supervisors can enhance interest if it is there	
	Being forced to participate is aversive	
	Therapists appreciate the voluntary status of ACT currently	
	ACT is a valuable add-on to existing interventions	
	A minority question the need for ACT at the agency	

From these qualitative codings, we asked four Yes/No questions to assess clinicians' attitudes about the appropriateness of ACT as an EBP to implement at our agency. This is another way to measure the diffusion of acceptance of ACT as a new EBP.

ACT is considered an appropriate model worth training in for many clinicians at the agency

Theory-derived questions	**% Yes responses**
Is ACT appropriate for our clients?	100
Is it worthwhile for the agency to pursue full implementation of ACT?	86
Does the agency adequately support you in delivering EBPs?	82
If barriers were addressed, would you want to be fully trained in ACT?	100

Conclusions

Using a diffusion of innovations framework, we replicated previous findings in the literature that clinicians typically are in favor of proven interventions provided they are flexible to use, apply to client population, and are supported by supervisors. We also replicated the literature finding that clinicians face significant barriers to training in new EBPs such as large caseloads, concern about burnout, and lack of system support for the specific EBP. The prediction that without focused training, declarative knowledge will precede procedural knowledge (experience) was confirmed at time 1: ratings of competence and confidence in the model were low; however, performance on the ACT knowledge questionnaire was significantly above chance. The survey at time 2 measured the **effect of our intervention**, revealing:

1) **Our experientially-focused training intervention showed modest increases in procedural knowledge as evidenced by increased ACT experience & ACT-positive attitudes.**

2) **Slight increases in confidence in ACT declarative knowledge were statistically-significantly accounted for by participation in the group.**

3) **No improvement in ACT declarative knowledge was seen at the group level, indicating that the effects of training have not yet affected declarative knowledge.**

Together, these data suggest that our survey methodology is a sensible way to measure the diffusion of ACT in a community mental health setting.

The results emphasize the need to address perceived barriers. Finally, attending to the goal of training (either to increase use of the model or knowledge of the model) can guide the balance of experiential and didactic components in training.

Continuing surveys can track diffusion of knowledge into practice.

Literature cited

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Acknowledgments

Thanks to Heike Lake and Dan Fox for support and encouragement. Thanks to Margie Kaiser, Lisa Stolz, and Heather Way for assistance with ensuring confidentiality. Thanks to Jessica Kiser for assistance with data coding.