Attitude: The Health Professionals' Mindset While Implementing Cognitive Behavioral Therapy for Psychosis Stepped Care (CBTp-SC)

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Abstract

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Brief Introduction: Delivering high-quality and consistent service is a challenge to health professionals working in community behavioral health agencies. Attitudes can affect positive or negative outcomes in the implementation of new services, such as Cognitive Behavioral Therapy for psychosis stepped-care (CBTp-SC), an evidence-based practice for improving symptom management among patients with psychosis.

Significance: Although organizational and leadership support play an important role in successful implementation of CBTp-SC in community behavioral agencies, attitudes of providers towards such evidence-based practices cannot be addressed directly by leadership alone. Attitudes include health professionals engaging in supervision, training and adhering to structural treatment fidelity with an open mind. Understanding attitudes towards CBTp-SC can inform refinements of implementation strategies.

Purpose: The primary objective was to summarize attitudes of health professionals regarding the acceptability, appropriateness and feasibility of CBTp-SC. Secondary objectives included

examining variance of these attitudes across characteristics of health professionals, and summarizing perspectives on usefulness, challenges, and effectiveness of CBTp-SC.

Study population: The study population included health professionals working in community behavioral health agencies who were trained by the University of Washington in the last five years to administer CBTp-SC.

Methods: This study is a cross-sectional study that used a web-based questionnaire. Forty-six health professionals completed a 30-item online questionnaire. Items consisted of questions to assess acceptability, appropriateness, and feasibility of CBTp-SC. Additional items measured usefulness of CBTp-SC, challenges in applying CBTp-SC, and ability of CBTp-SC to address problems and/or conditions. One-way ANOVA was used to examine variations in acceptability, appropriateness and feasibility of CBTp-SC across provider characteristics. All analysis was performed using R and excel for data management, statistical analysis, and figures. Statistical significance was defined for p-values less than 0.05.

Results: Findings indicate that health professionals trained in CBTp-SC found it acceptable, appropriate, and feasible to deliver within community behavioral health settings. However, there was slightly more variability for feasibility with lower mean scores for two of the four items used to measure this construct. We did not detect statistically significant variation in attitudes towards these three constructs across provider characteristics. Health professionals, on average, rated CBTp-SC as moderately useful and effective and moderately challenging to apply.

Conclusion: This study provides evidence that health professionals generally find referring and providing CBTp-SC as acceptable and appropriate in community behavioral health settings.

Further research is needed to examine feasibility of providing CBTp-SC in community behavioral health agencies and whether feasibility accounts for attitudes impacting delivery of CBTp-SC to patients with schizophrenia spectrum disorder.

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Introduction

Schizophrenia is a serious, complex brain disorder, with a reported median incidence rate of 15.2 per 100,000 person (McGrath, J., Saha, S., Chant, D., & Welham, J., 2008; Simeone, J., Ward, A., Rotella, P., Collins, J., & Windisch, R., 2015). The classic approach to treat schizophrenia spectrum disorder is with antipsychotic drugs to reduce symptoms of the disease (Stępnicki, P., Kondej, M., & Kaczor, A., 2018). Although most individuals with schizophrenia are more likely to be offered medications than any other form of treatment for this disorder, national schizophrenia treatment guidelines, established by the American Psychiatric Association (2013), recommend multimodal care consisting of antipsychotic pharmacotherapy, psychotherapy, case management, family interventions, and vocational support. Cognitive behavioral therapy for psychosis (CBTp) is an evidence-based intervention that offers structured yet flexible individualized approaches to treating individuals who experience distress or impairment related to psychotic symptoms (Kopelovich, Strachan, Sivec, and Kreider, 2019). Meta-analyses and systematic reviews indicate that, compared to those who received treatment as usual, individuals who receive 12 or more CBTp sessions demonstrate significant improvements in positive symptoms, mood symptoms, and functioning, with negative symptoms also responding but with lower effect sizes (McDonagh, M., Dana, T., Cantor, A., Selph, S., Monroe-DeVita, M., Kopelovich S., Devine, B., Blazina, I., Bougatsos, C., Grusing, S., Fu, R., Haupt, D., 2017). While research demonstrates clinically significant improvements in individuals who participate in CBTp, health professionals and agencies have differing perspectives on CBTp and its implementation within clinical settings. As quoted in the book, *The Sisterhood of the Traveling Pant,* "The problem is not the problem, the problem is your attitude about the problem..." Our research explores attitudes around implementation and referral of CBTp.

The two theories highlighted in this paper have been used to explore barriers to implementation of CBTp within community behavioral health agencies, in which numerous barriers may exist to implementation, including but not limited to high caseloads, limited time, and restricted budgets. First, LeComte et al., (2018), examined implementation of CBTp using the Theory of Planned Behavior (TPB) (LeComte et al., 2018), which focuses on three constructs 1) attitudes towards act or behavior; 2) subjective norms; and 3) perceived behavioral control. Although behavioral control did not actually control for "intent" and "behavioral action" in the TPB model, these three constructs were still identified as predictors, which determined whether health professionals, in this case, found CBTp implementable. Second, Hazell, Strauss, Hayward, *et al.,* (2017), used Normalization Process Theory (NPT) to explore the process that guides implementation based on four factors, 1) coherence: attitude towards a new idea, 2) cognitive participation: the willingness of staff to be involved in implementation, 3) collective action: service level pragmatics involved in implementation, and 4) reflexivity: how the implementation process should be evaluated. Findings indicate that three of the NPT factors should be considered prior to implementation of CBTp, while no support was found for the fourth NPT factor, collective action (Hazell, Strauss, Hayward, *et al.,* 2017). Notably, both of these studies focused on a standard, non-stepped care model of CBTp.

The model for CBTp Stepped Care (CBTp-SC) was first proposed by Kopelvich et al who developed a model of care that has been piloted in community behavioral health agencies within

Washington State. As part of this pilot work cohorts of health professionals from different disciplines are trained to administer different CBTp protocols that vary in intensity and duration (Kopelovich, Strachan, Sivec, & Kreider, 2019). This is in contrast to traditional models of CBTp which consist of master or PhD level health professionals being trained in formulation-based CBTp. How health professionals perceive CBTp-SC is unknown. Our research intended to add to this literature by exploring attitudes around referral and implementation of CBTp using a measure that was quick, reliable, and easy to use. Specifically, the primary objective was to summarize attitudes of health professionals regarding the acceptability, appropriateness and feasibility of CBTp-SC. Secondary objectives included examining variance of these attitudes across characteristics of health professionals, and summarizing perspectives on usefulness, challenges, and effectiveness of CBTp-SC. We hypothesize that health professionals' characteristics such as level of stepped care and discipline play predominant roles in attitudes around referral and implementation of CBTp-SC. Given that health professionals in community behavioral health agencies are often burdened by high caseloads and other barriers to implementation of novel evidence-based practices, it is important that we capture attitudes relevant to CBTp-SC being practiced in the clinical setting.

Methods

Study design. This was a cross-sectional study that used a web-based questionnaire to assess attitudes around providing CBTp among health professionals in community behavioral health settings. The research plan was submitted as an amendment to the current research project (E-091316-S) evaluating Cognitive Behavioral Therapy for Psychosis Implementation in Community Mental Health to the Washington State Internal Review Board (IRB) and was determined exempt from review.

Population and setting. We surveyed health professionals employed by one of the five community behavioral health agencies across Washington State that have implemented CBTp-SC (K=4). Eligible participants included any provider who completed the CBTp-SC training program conducted by the UW CBTp-SC Implementation Team in the past 5 years (N=112). We included health professionals defined as men and women who are 18 years and older employed by community behavioral health agencies. Health professionals included a range of disciplines such as master's level (licensed and unlicensed) mental health clinicians, peer support specialists, case managers, and other allied health professionals or paraprofessionals.

Recruitment and Consenting of Participants. Participants were recruited from an archive of health professionals who underwent training from the University of Washington in the past five years to administer CBTp-SC. Health professionals were provided an initial email describing the research, including eligibility criteria, and privacy concerns that included a unique link to the web-based questionnaire. Prospective participants were informed that data would be collected and managed using REDCap electronic data capture tools hosted at University of Washington (Harris, Taylor, Thielke, Payne, Gonzalez, & Conde, 2008; Harris, Taylor, Minor, Elliott, Fernandez, O'Neal, McLeod, Delacqua, Delacqua, Brothier, & Duda, 2019). REDCap (Research Electronic Data Capture) is a secure, web-based software platform designed to support data capture for research studies, providing 1) an intuitive interface for validated data capture; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures

for seamless data downloads to common statistical packages; and 4) procedures for data integration and interoperability with external sources (Harris et al., 2008; Harris et al., 2019). Participants were informed that completion of the questionnaire was voluntary, and all information received would be kept confidential and no identifiable information would be shared with anyone outside of the research team. Clicking on the link to start the questionnaire was considered confirmation of eligibility and consent. Survey respondents received a $15 electronic Amazon gift card after completing the questionnaire.

Measures. The web-based questionnaire consisted of 30 items. Data collected included information on participant demographic and professional background, validated measures of attitude towards CBTp-SC (Weiner et al, 2017), and questions regarding the usefulness of CBTp-SC, challenges with using CBTp-SC, and problems and/or conditions that could be addressed with CBTp-SC.

Demographics and professional background. Demographic information collected included gender and age. Additionally, information on participants' professional background was collected including discipline (i.e., Mental Health Professional (MHP) unlicensed, MHP licensed, peer support specialist, prescriber, nurse, and other), experience in a healthcare setting (i.e., number expressed in years associated with experience working with individuals with psychosis), time since CBTp-SC training (i.e., less than 6 months ago, between 6-11 months ago, between 1-5 years ago, and more than 5 years ago), and self-reports of type of CBTp-SC primarily provided (i.e. Step 1 (Low Intensity), Step 2 (Group), and Step 3 (High Intensity)).

Attitudes to CBTp-SC. Three attitudes were measured: Acceptability of Intervention Measure (AIM), Intervention Appropriateness Measure (IAM), and Feasibility of Intervention Measure (FIM) (Weiner et al., 2017). Acceptability is defined as "the perception among implementation stakeholders that a given treatment, service, practice, or innovation is agreeable, palatable, or satisfactory" (p.2). Appropriateness is defined as "the perceived fit, relevance, or compatibility of the innovation or evidence-based practice for a given practice setting, provider, or consumer" (p.2). Feasibility is defined as "the extent to which a new treatment, or an innovation, can be successfully used or carried out within a given agency or setting" (p.2). These attitudes were assessed using measures that are brief, non-specific to clinical context or problem, and readily available for use. Measures have been validated and demonstrate content validity, discriminant contact validity, reliability, structural validity, structural invariance, known-group validity, and responsiveness to change (Weiner et al., 2017). Each measure construct consisted of four-items. Participants responded to each measure using a 5-point Likert scale (1=completely disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=completely agree) indicating their extent of agreement. According to Proctor et al. (2011), the three constructs are considered "leading indicators" of implementation success. The units for analysis of acceptability, appropriateness, and feasibility were examined individually and aggregated to examine mean levels for each construct.

Additional variables. Three additional questions were included in the questionnaire to assess usefulness of CBTp-SC, challenges in applying CBTp-SC, and ability of CBTp-SC to address problems and/or conditions of patients (Table 4). Responses were on a 5-point Likert scale (1=not at all, 2=a little bit, 3=moderately, 4=quite a bit, 5=extremely).

Data Analysis

Prior to analyses, all data were deidentified and screened for outliers. Participants were excluded from the questionnaire if they did not complete all 12 items associated with AIM, IAM, and FIM. The units for analysis of acceptability, appropriateness, and feasibility were summarized individually and aggregated to examine mean levels for each construct, distribution of the aggregate measure was explored using box plots. Means for each scale (AIM, IAM, FIM) were compared across demographic and professional characteristics using one-way analysis of variance (ANOVA). All statistical analyses were performed with R software (RStudio Team, 2016). Statistical significance was defined as p-values less than 0.05.

Results

Questionnaires were sent to 112 individuals. Thirty were returned due to non-working emails, and one questionnaire was incomplete. Removal of a piloting questionnaire yielded an analytic sample of 46 completed questionnaires out of 80 prospective participants and a questionnaire response rate of 58%. Table 1 provides descriptive data of all 46 health professionals who completed the questionnaire. Out of 46 health professionals in the study, 61% were women and 61% were licensed mental health practitioners. The mean age was 46 years old (SD=13.5, Range 23-66). On average participants had 10 years of experience working with individuals with psychosis in a clinical setting (SD=8.7, Range 1-34). Most of the trainees reported that they had been trained between 1-5 years ago (84%), and 78% reported that they were actively providing CBTp-SC. Our sample consisted of respondents who were providing all three levels of care, including Step 3 (high-intensity; 41%), Step 2 (group CBTp; 24%), and Step 1 (low-intensity, 35%).

Table 2 displays individual item means for each of the twelve-items used to measure acceptability (AIM), appropriateness (IAM), and feasibility (FIM) of the intervention. There were greater variations in the responses for items measuring feasibility. Specifically, while three out of four items had a mean of 4 (agree), one item had a mean of 3, indicating ambivalence.

Figure 1 shows the distribution data for overall aggregate mean scores measuring AIM, IAM, FIM of CBTp-SC. Both AIM and IAM had lower median mean scores but similar inter-quartile ranges as AIM. The four-items found in construct AIM had an average scale mean score of 4 (agree), showing a standard deviation ranging from 0.6 to 1. The four-items found in construct IAM had an average scale mean score of 4 (agree), showing a standard deviation ranging from 0.5 to 0.7. As indicated in Table 2 there was greater variability in the individual items that comprised the overall FIM measure. The four-items found in construct FIM had an average scale mean score of 3 (neither agree nor disagree), showing a standard deviation ranging from 0.6 to 2.09.

One-way ANOVA was used to examine variations in AIM, IAM, FIM of CBTp-SC across health professionals' characteristics. For comparing and evaluating competing factors, Table 3 displays ANOVA results that evaluate variation in AIM, IAM, FIM by participants' demographic and professional characteristics (i.e., age, discipline, years of experience, and primary stepped care provided). Results show no statistical significance between the three

stepped care groups when compared to the varying constructs: acceptability, appropriateness, and feasibility. The same is true for age cohorts, discipline, and years of experience.

Table 4 provides information on health professionals' views that explore how useful it is to apply CBTp-SC to patients experiencing psychotic symptoms; how challenging it is to apply the CBTp-SC model to patients; and how well components of CBTp-SC address problems and/or conditions of patients. Overall, results indicated ambiguity on all three measures with means all around three (usefulness of applying CBTp-SC g mean 3.76 (SD=1.099); challenge of applying CBTp-SC mean 3.08 (SD=1.05); effectiveness of CBTp_SC for addressing problems and/or conditions of patients with schizophrenia mean 3.43 (SD=0.98)).

Table 1: Demographic and professional characteristics of questionnaire respondents.		
Demographics		
Age, mean (SD)	46.6	13.5
Gender, n (%)		
Man	16	34.8
Woman	28	60.9
Professional characteristics		
Discipline, n (%)		
MHP Unlicensed	8	17.4
MHP Licensed	28	60.9
Peer Support Specialist	5	10.9
Prescriber	0	0.00
Nurse	0	0.00
Years of clinical experience, mean (SD)	10.69	8.7
Providing CBTp level stepped care, n (%)		
No	10	21.7
Yes	36	78.3
CBTp level stepped care primarily provided, n (%)		
Step 1 Low-Intensity	16	34.8
Step 2 Group	11	23.9
Step 3 High-Intensity	19	41.3
Time since first trained in CBTp level stepped care, n (%)		
Less than 6 month ago	1	2.2
6-11 months ago	3	6.5
1-5 years ago	39	84.8
More than 5 years ago	3	6.5
On-going professional development,* n (%)		
Individual Supervision at my agency	14	30.4
Group Supervision or Consultation at my agency	26	56.5
UW CBT ECHO Clinic	20	43.5
Other	8	17.4
Number of patients treated since trained, n (%)		

0-4	19	41.3
5-10	10	21.7
11-20	14	30.4
21+ more years	3	6.5
Number of eligible patients for CBTp level stepped care, n (%)		
0-4	12	26.1
5-10	13	28.3
11-20	8	17.4
21+ more	13	28.3
Routine screening for CBTp level stepped care, n (%)		
No	22	47.8
Yes	24	52.2
*not mutually exclusive		

Table 2: AIM, IAM, and FIM Likert responses to individual questions analysis

	5pt Likert Scale (1-5)		
	Mean	SD	IQR
Acceptability of Intervention Measure (AIM)			
Cognitive Behavioral Therapy (CBTp) meets my approval.	4.39	0.682	1
Cognitive Behavioral Therapy (CBTp) is appealing to me.	4.19	1.067	1
I like Cognitive Behavioral Therapy (CBTp).	4.19	1.00	1
I welcome Cognitive Behavioral Therapy (CBTp).	4.43	0.654	1
Intervention Appropriateness Measure (IAM)			
Cognitive Behavioral Therapy (CBTp) seems fitting.	4.34	0.673	1
Cognitive Behavioral Therapy (CBTp) seems suitable.	4.36	0.571	1

Cognitive Behavioral Therapy (CBTp) seems applicable.	4.39	0.682	1
Cognitive Behavioral Therapy (CBTp) seems like a good match.	4.30	0.726	1
Feasibility of Intervention Measure (FIM)			
Cognitive Behavioral Therapy (CBTp) seems implementable.	4.17	0.708	1
Cognitive Behavioral Therapy (CBTp) seems possible.	4.39	0.613	1
Cognitive Behavioral Therapy (CBTp) seems doable.	2.89	2.089	4
Cognitive Behavioral Therapy (CBTp) seems easy to use.	3.69	1.051	1

Responses reflect the 5-point Likert scale (1=completely disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=completely agree)

Table 3: ANOVA acceptability, appropriateness, and feasibility of CBTp compared to characteristics (Age, Discipline, Primary CBTp (Primary), and Years of Experience (YOE))

Source	df	SS	Mean sq	F	Pr(>F) Sig.
AIM x Age	4	14.16	3.54	0.639	0.64
IAM x Age	4	14.08	3.52	0.517	0.72
FIM x Age	4	13.64	3.41	0.623	0.651
AIM x Discipline	3	73.8	24.6	1.75	0.197
IAM x Discipline	3	74.15	24.71	1.68	0.21
FIM x Discipline	3	73.8	24.6	2.38	0.107
AIM x YOE	3	13.15	4.38	0.57	0.638
IAM x YOE	3	13.55	4.51	0.478	0.701
FIM x YOE	3	11.92	3.975	0.67	0.581

AIM x Primary	2	6.475	3.2375	0.188	0.830
AP x Primary	2	7.708	3.854	0.222	0.803
FE x Primary	2	6.533	3.266	0.2438	0.787

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

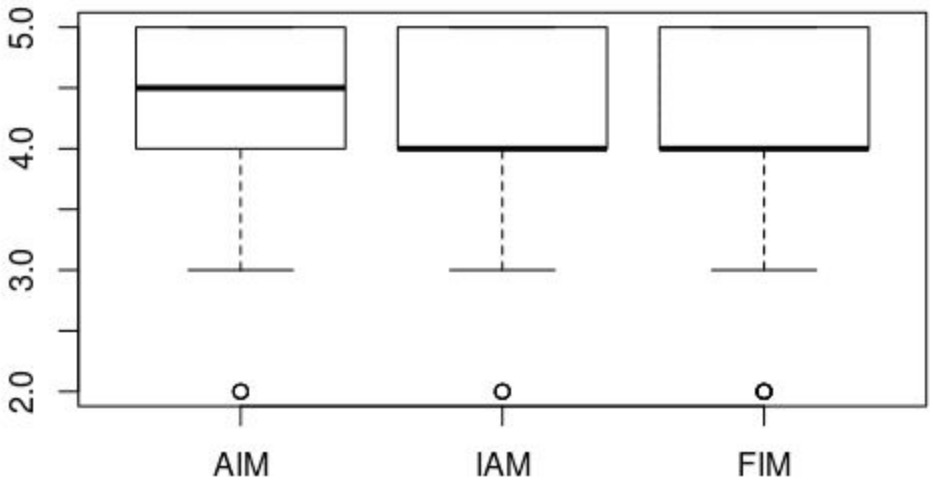

Figure 1: Boxplot AIM, IAM, and FIM. Acceptability of Intervention Measure (AIM), Intervention Appropriateness Measure (IAM), and Feasibility Intervention Measure.

Table 4: Response to individual questions evaluating usefulness, administering, and addressing problems and/or conditions

	5-point Likert scale		
	Mean	S.D	IQR
How useful is the application of the CBT protocol in which you were trained to your patients experiencing psychotic symptoms?	3.76	1.099	1
How challenging was applying the CBTp model to your patients?	3.08	1.050	2
How well do the components of the CBTp protocol you were trained in address the problems/conditions of the patients you delivered the treatment to?	3.43	0.980	1

Responses were on a 5-point Likert scale (1=not at all, 2=a little bit, 3=moderately, 4=quite a bit, 5=extremely).

Discussion

Health professionals reported that CBTp-SC is acceptable, appropriate, and feasible in community behavioral health agencies. Responses showed little variability in acceptability and appropriateness. Mean scores for feasibility were somewhat lower and varied. There was little to no variation in attitudes towards CBTp-SC by provider demographics or professional characteristics.

With respect to feasibility, the slightly lower rating and greater variance may be reflective of the fact that questions rely on the respondent to interpret what is feasible within the organization. Thus, ratings reflect both an individual health care professionals overall assessment of the CBTp-SC, but also of organizational resources such as budget allocation and support from leadership for implementation of CBTp-SC. Notably, the lowest mean score among the contributors to overall feasibility was the rating for whether CBTp-SC was "doable" suggesting the possible presence of organizational barriers, such as caseloads or budgets.

Contrary to expectations, stepped care groups did not differ significantly in their perceptions of acceptability, appropriateness, or feasibility of CBTp-SC. The same was true for age cohorts, discipline (i.e., Mental Health Professional (MHP) unlicensed, MHP licensed, peer support specialist, prescriber, nurse, and other), and years of experience. Notably, health professionals who participated in this study identified being trained in one or more of the CBTp-SC steps, which might account for why results did not find statistical significance. Additionally, it is possible that attitudes regarding CBTp-SC may have been one determinant of study participation such that scores tended to be more favorable with little variation. However, findings are

consistent with prior research regarding attitudes of providers towards CBTp (Hazell *et al.,* 2017; LeComte et al., 2018).

Despite these largely positive attitudes regarding acceptability, appropriateness and feasibility of CBTp-SC health professionals reported that CBTp-SC was only moderately useful and able to address problems and/or conditions in patients with schizophrenia. They also reported that it was moderately challenging to apply CBTp-SC in their patient care. Health professionals' perception of these questions might be conservative in nature to preserve oneself behaviorally from responding more assertively to a question they interpreted. Further exploration of these constructs is needed as such beliefs may represent barriers to successful implementation, particularly in the context of community health clinics with limited resources.

Strengths and Limitations. This study had several strengths including the use of a well validated set of measures for provider attitudes, and collection of data on a wide variety of professional characteristics. The primary limitation is that the small sample size used in this study may precluded multivariate analysis, and that selection bias may have lead findings to be overly optimistic with respect to providers attitudes regarding CBTp-SC.

Conclusion

In closing, this study allowed us to explore health professionals' attitudes around referring and providing CBTp-SC to patients in five different community behavioral health agencies across Washington State using constructs: acceptability, appropriateness, and feasibility. In comparing the constructs to individual characteristics provided an opportunity to explore any statistical significance associated to help inform possible impact to delivery outcomes to patients with schizophrenia spectrum disorder. Health professionals found CBTp-SC as acceptable and appropriate, future research should explore feasibility of implementing CBTp-SC in community behavioral health settings. Specifically, an exploration around how doable and easy it is to use the structured treatment modality in community behavioral settings is warranted. Since CBTp-SC has not been formally tested and this being the first study that evaluates implementation outcomes of CBTp-SC, we need to better understand how the model is perceived by health professionals and whether stepped care is equivalent to, as efficient, and seen as appropriate compared to traditional CBTp implementation.

Recommendation

Given the sparse amount of literature and studies evaluating implementation outcomes of CBTp-SC, it is advisable to further explore the equivalency between CBTp implementation and CBTp-SC. Additional studies evaluating health professionals' perception of CBTp-SC in community behavioral health settings could further research examining implementation practices. Regarding feasibility of referring and implementing CBTp in community behavioral health agencies, it is recommended that a larger sample size be collected to further examine health professionals' perception for more reliable results.

Given the mental health training and implementation literature on the correlation between health professionals attitudes towards the evidence-based treatment and training outcomes like comprehension, knowledge base, and application of an evidence-based treatment (Edmunds, Beidas, & Kendall, 2013; Jolley, Onwumere, Bissoli, Bhayani, Singh, Kuipers, Craig, & Garety,

2013; Stirman, Bhar, Spokas, Brown, Creed, Perivoliotis, Farabaugh, Grant, & Beck, 2010), the AIM, IAM, and FIM may be useful additions to training evaluation efforts.

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Terms:

Cognitive Behavioral Therapy for psychosis (CBTp)

CBT for psychosis (CBTp)

CBT for psychosis stepped care (CBTp-SC)

Health Professionals

Evidence-based practices (EBP)