Consumer Attitudes towards Evidence Based Mental Health Services among American Mental
Health Consumers

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Abstract

Much work has been done in recent years to understand mental health provider attitudes towards Evidence Based Practices (EBPs) in part to help explain the scarcity of such practices in community settings. However, little work has been done on consumer attitudes towards EBPs. The Consumer Attitudes towards Evidence Based Services (CAEBS) scale to date administered only on a college sample. In the current study, the 29-item CAEBS was administered to a nationwide sample of participants from websites offering classified advertisements (N= 312). Participants were predominantly Caucasian people between ages 18 and 80 with histories of mental health treatment utilization and strong beliefs as preferred therapists' practices based on these experiences. An Exploratory Factor Analysis (EFA) suggested four-factors based on 26 of the items: Beliefs Regarding Therapists' Practices, Attitudes about Mental Health Policy, Negative Micro-Level Attitudes toward EBPs, and Negative Macro-Level Attitudes towards EBPs. Participants who were educated at a Bachelors' degree level and unsatisfied with prior treatments showed more positive responses towards EBPs than those with a Masters' degree and who were satisfied. Those who were satisfied with their past treatments, had received a non-EBP in the past, had access to transportation, and had seen symptom improvement since their treatment endorsed lesser negative attitudes towards EBPs.

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Chapter 1: Introduction

Over the past few decades, researchers in mental health fields have shown a strong interest in investigating the relative strength of certain treatment protocols, services, and practices over others in relieving various causes or manifestations of psychological distress. The outcomes of such studies have resulted in the recognition that certain mental health services tend to outperform others in treating specific mental health problems (see Chambless et al., 1998 for a review). These treatments have been termed Evidence Based Practices (EBPs) by the American Psychological Association (2005). At the same time, available practices in community settings have been observed to favor practices less supported or even proscribed by scientific studies over EBPs (Hoagwood & Olin, 2002). This underutilization of EBPs in the community has been thought to be largely due to negative beliefs held by the suppliers (practitioners) of mental health services (Aarons, 2002). However, economic theories suggest that consumers may play an important role in dictating which goods and services can be successfully provided to the public. Consumer attitudes toward EBPs are only beginning to be studied and no systematic, quantitative measure of such attitudes is currently in use. The Consumer Attitudes towards Evidence Based Services scale (CAEBS) was designed to measure aspects of attitudes toward EBPs which are relevant to consumers (Teh & Mueller, 2011). In the current study, the CAEBS was administered to a sample of adults seeking information on mental health services on the internet. Data on participants' prior experiences with mental health treatments were taken, as well as demographic information. Factor-means were compared across groups to examine the effects of prior psycho-social treatment on attitudes toward EBPs.

The Supply-Demand Relationship

Researchers in economics and marketing have long emphasized the importance of both supply and demand forces in shaping successful product sales. This idea dates back to Adam Smith's book, *The Wealth of Nations*, published in 1776, in which the premise that the market value of a good or service is driven by its availability, or supply, and the extent of consumer interest, or demand, in said product. According to this theory, products for which there is high demand and low supply will create missed opportunities for optimal sales whereas those in high supply and low demand are subject to unnecessary waste and accompanying decreases in value until the ratios can be equalized (Henderson, 1922). It has long been asserted within the economics literature that without careful consideration of both supply and demand, efficient consumption and production cannot occur. To disregard consumer demand would place a supplier at risk for overproducing an unwanted good or service while losing sales and profit on a popular product that could be sold in higher quantities (Henderson, 1922).

Modern economic and marketing theories have built on this basic idea of needing to take supply and demand into consideration when negotiating market value. One such idea focuses on the interpersonal relationships that best support effective product marketing. Wilson's (1995) Model of Buyer-Seller Relationships recognizes that several variables may contribute to a strong consumer-supplier relationship: trust, cooperation, mutual goals, interdependence, performance satisfaction, available alternatives, adaptation, investments, shared technology, summative constructs, structural bonds, and social bonds. Of particular note is the concept of mutual goals, which states the importance of shared values between consumers and suppliers and the assumption that the relationship brings both consumers and suppliers closer to their respective goals. This goes hand in hand with trust, which is the understanding that both parties are striving to benefit each other to the greatest extent of their abilities, within reason (Wilson, 1995).

Recent years have also seen an increase in efforts to empower consumer choice within the prescription drug industry. These have been termed Direct to Consumer Advertising (DCTA) and are now commonplace for a variety of prescription and non-prescription drugs (Pharmaceutical Researchers and Manufacturers of America, 2005). Although debate continues on whether or not these advertisements are ultimately beneficial to consumers (e.g. Myers, Royne & Deitz, 2011; Pharmaceutical Researchers and Manufacturers of America, 2005), it is clear that they represent a concentrated effort to engage the public in their own health care decisions. Proponents of this movement cite its potential to educate consumers on the pharmaceutical drugs they purchase and provide them with a means by which they may investigate and question decisions made by their health care providers (Myers et al., 2011, Hoek, Glendall, Rapson, & Louviere, 2011).

Evidence Based Practices in Mental Health

Over the past few decades there has been a proliferation of studies that examine which mental health treatments produce the best outcomes often using strong experimental studies, such as randomized controlled trials. Multiple groups, including various divisions within the American Psychological Association (APA), have compiled lists of treatments that have been shown to outperform other treatments for specified disorders (e.g. APA/CAPP Task Force on Serious Mental Illness and Severe Emotional Disturbance, 2007). Such treatments have been termed EBPs by the APA when used in conjunction with clinical expertise on treatment fit with patient characteristics and patient choice (American Psychological Association Statement, 2005). Evidence Based Practices can be instrumental in ensuring effective and efficient care for consumers suffering from a range of mental health concerns (Stahmer & Aarons, 2008). As such, information on the relative probability of success for different treatment protocols is widely

available to practitioners, yet well supported treatments are rarely used in practice settings (Kazdin, 2000) and thus the availability of such treatments for consumers is in short supply.

Several barriers have been hypothesized to interfere with the efficient utilization of EBPs for clients who might benefit from these services. Such barriers include practical considerations, such as cost and the need for increased training and supervision resources (Westen, Novotny, & Thompson Brenner, 2004). In addition, some researchers have identified an array of negative attitudes that providers often hold towards EBPs that may impact their usage in practice settings (e.g. Aarons, McDonald, Sheehan, & Wallrath-Green, 2007). Such attitudes include concerns about the validity of research findings outside of the laboratory and about the generalization of results to the populations of clients that present in everyday practice (e.g. Westen et al., 2004). Other concerns that practitioners have voiced include worries that the use of standardized protocols may limit the role of clinician judgment in service provision (Aarons et al., 2007), and that therapists in the community may not be capable of implementing treatment protocols with the fidelity that clinicians in research settings have displayed (Waller, 2009). These beliefs persist despite scientific evidence from lab-based efficacy studies to community-based effectiveness studies indicating that many EBPs function well in practice environments without substantial detriment to treatment fidelity or outcomes (e.g. Watkins et al., 2011; Letourneau et al., 2009). Despite such results, the disconnect between researcher and practitioner attitudes towards EBPs has continued and advocates for practitioners against using EBPs have persisted in voicing skepticism on the validity and utility of EBPs in community practices (e.g. Waller, 2009).

Influences on Consumer Demand for EBPs

Contrasted with the DTCA movement in pharmacology marketing, the majority of information on mental health problems and treatments available to consumers comes from the internet (Oh, Jorm, & Wright, 2009). One study suggests that consumers of mental health information trust information online more so than information from print sources (Oh et al., 2009). At the same time, results from a study on the quality of such websites indicates that most do not discuss the evidence base for the information they provide, the qualifications of the writer to advise on mental health issues, the existence of any formal review board, nor any up-to-date research findings (Goodwin, Truschel, & Singh, 2008). Furthermore, Goodwin and colleagues (2008) found that the reading level required for most mental health websites precludes many potential consumers from fully comprehending and evaluating the content. With the overabundance of mental health information available to consumers online and the wide range in quality of these websites, finding credible and understandable information on mental health disorders and treatments can be a daunting task for consumers (Oh et al., 2009).

Little is known on how internet-based depictions of mental health issues effect consumer attitudes toward EBPs. Most research into attitudes towards EBPs has focused on the attitudes of practice suppliers, such as clinicians and clinical supervisors (e.g. Aarons, 2004). However, the relationship between supply and demand thoroughly studied in other markets suggests the underutilization of EBPs could reflect either low consumer demand or lack of knowledge about EBPs. As consumers learn about EBPs and if they come to believe that EBPs services are advantageous to them, empowered consumer demand should increase. Such increased demand should push the market toward implementation of EBPs and would provide additional pressure on providers to engage in EBPs. However, far too little is known about consumer views of EBPs

to begin to understand how these economic processes might work or to capture such demand in a manner that will influence implementation.

Research within the social psychology tradition has shown that behavior is strongly influenced by attitudes, norms, and perceived control over such behavior (see Ajzen, 1998 for a review). As such, understanding consumer attitudes towards EBPs can help elucidate consumer demand and thus consumer influences on the supply of different psychological services. If it can be determined that a divide exists between consumer and provider attitudes on EBPs, knowing consumers' attitudes could influence providers to adjust services to better meet client preferences. In this way, the extent to which consumers are empowered and aware of how EBPs can shorten response times and improve treatment outcomes, consumers are likely to increase demand. Such increased demand could affect the ratio of available EBPs and non-EBPs services in the community.

To date, with exception to the study described below, a careful review of the literature on consumer, client, and patient attitudes towards mental health services on PsycNET and EBSCOHOST uncovered no large quantitative studies conducted on consumer attitudes toward EBPs in mental health. There have been several small, qualitative studies that have pointed to interesting issues, but no generalizable findings. All of these studies utilized samples of inpatients in specific hospitals with severe mental illness and their families (Scheyett, McCarthy, & Rausch, 2006; Tannenbaum, 2008; Cleary, Hunt, Freeman & Walter, 2007). Because the participants of these studies were inpatients, many might not have been treatment seekers themselves. Patients who were legally obligated to receive mental health treatment through court orders and caregiver requests and who might not have wanted mental health services may have been overrepresented in such studies.

Despite difficulties with interpreting these preliminary studies on consumer attitudes towards EBPs, the extant qualitative research has provided a groundwork for understanding such attitudes. One finding from a focus group study on inpatients with psychotic disorders and their family was that these consumers had limited knowledge regarding EBPs, their focus, and how they are implemented (Scheyett et al., 2006). Another focus group using inpatients with severe mental illness found that the degree to which consumers were aware of EBPs and actively searched for information on treatment options was variable and that some consumers went to great effort to educate themselves on EBPs (Tanenbaum, 2008). Some of these qualitative studies have found that their particular groups of consumers were skeptical of EBPs and the ability of EBPs to provide the flexibility required in order to meet their unique needs (Sheyette et al., 2006, Flynn, 2005). Other studies have found consumers held primarily positive views towards EBPs and valued information on the relative evidence supporting different forms of treatment (Tannenbaum, 2008, Cleary et al., 2007). According to one preliminary quantitative study, consumers may hold more positive attitudes towards EBPs than providers (Cleary et al. 2007). The data provided by these studies, although moderately inconsistent, suggest interesting findings regarding consumers' views on EBPs.

Currently available studies on consumer attitudes towards EBPs have provided valuable input about such attitudes, yet much remains to be known regarding consumer perspectives on EBPs. One of the possible limitations that current studies have faced is that no standardized instrument for measuring consumer attitudes is currently available and the specific protocols for collecting data on such attitudes have likely varied. Another consideration in interpreting these data is that most of these studies utilized small samples that were constrained to geographic areas, treatment settings, and problem areas for which participants were seeking treatment. Given

the nature of qualitative data, inferences regarding the factors that influence consumer decision making are likewise limited. In order to more fully understand consumer attitudes and how best to strengthen consumers' empowered voice in making treatment decisions, standardized instruments tested in large, more representative samples are needed.

Prior Study

The CAEBS (Teh & Mueller, 2011) was developed in a preliminary study to establish items that provided replicable indicators of public views on EBPs and perceived barriers to making empowered treatment choices. Authors initially brainstormed twelve constructs hypothesized to encompass a range of potential consumer attitudes towards EBPs in mental health based on clinical experience and research on consumer and practitioner attitudes towards EBPs (e.g. Tannenbaum, 2008, Aarons et al., 2007). Teh & Mueller (2011) subsequently generated 159 items in the form of statements expressing attitudes (e.g. "Research-based services are the best you can get") from the constructs. These items were reduced to 108 following a check for understanding and similarity among a sample of undergraduate and graduate students. The 108 items were then administered online to undergraduate university students with a prompt requesting participants to rate items on a Likert scale from "Strongly Disagree" to "Strongly Agree" within the context of a hypothetical treatment seeking situation.

An exploratory factor analysis (EFA) was conducted and the resulting scree plot initially suggested a six factor solution would be most appropriate (see Pedhazur & Schmelkin, 1991 for guideline used). However, an insufficient number of items loaded onto the sixth factor to make meaningful inferences about factor properties and was excluded from further analysis. The item list was reduced to the five or six items that most closely approximated normality and loaded highest on each factor to avoid overrepresentation of any one factor in subsequent analyses.

Another EFA was run on this reduced list. The final five factor solution produced was as follows: 1) Preferences for EBPs above other treatments, 2) support for policies mandating EBP use, 3) concerns about the validity of the scientific method through which EBPs were evaluated, 4) practical barriers that can affect consumers' ability to choose treatment options freely, and 5) concerns regarding the ability of EBPs to generalize across cultures. Twenty-nine items were chosen to reflect the 5-6 items per factor that demonstrated the highest factor-loadings (see full 29 item measure in Appendix A and the factor-loadings of each item in Appendix B).

Multivariate Analyses of Variance (MANOVAs) conducted on factor-level mean item endorsement and demographic items indicated that prior self-reported mental health treatment was associated with lower scores on the factors describing barriers to treatment choice and support for policies requiring EBP use. Likewise, having a loved one who received mental health treatment was associated with lower endorsement of items measuring agreement with mandating EBP use, cultural generalizability of EBPs, and preference for EBPs over non-EBPs. Given the low availability of EBPs in most settings, it is likely that the services these participants received were non EBPs. These results suggest that participants were in some way satisfied with the therapy they received and did not think that EBPs were necessary for adequate psychosocial care. Furthermore, participants who identified their primary ethnicity as Asian or Pacific Islander endorsed a higher mean endorsement of support for mandating EBPs.

One of limitations of the prior study was that it did not directly target participants who had experience with treatment seeking prior to or while participating. This is particularly problematic, given that prior use of or exposure to mental health services was associated with consumer attitudes. Furthermore, a college student sample asked to imagine hypothetical treatment seeking might structure their attitudes about EBPs differently from a sample more

closely aligned with actual treatment seeking. Additionally, the factor structure of the CAEBS items had yet to be examined with confirmatory factor analysis (CFA). Participants endorsing previous experience with mental health treatment showed different patterns of responses to the factors uncovered in the CAEBS in the previous study (Teh & Mueller, 2011) and it is possible that aspects of such experiences could affect attitudes towards EBP use in mental health. As such, a secondary aim of the study was to examine relationships between participants' experiences with psychotherapy and their responses to CAEBS items.

The Current Study

The primary aim of the current study was to examine whether the factor structure of the CAEBS revealed in the prior study was maintained in a sample of adults currently engaged in some form of treatment seeking or information seeking processes. The study attempted to achieve this goal by administering the CAEBS to a nation-wide sample of adults seeking information on mental health treatments via websites targeted to consumers of mental health treatment. Results were factor analyzed using CFA with the factors identified from the prior study. Root Mean Square Residuals (RMR), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Indices (AGFI), and Comparative Fit Indices (CFI) were examined to assess the model's fit to the data (see Brown, 2006 for recommendations). Demographic variables (e.g. ethnicity, sex, and age) along with history of psychosocial treatment were tested as auxiliary variables that may be correlated with various factors. Given the thematic similarities of items within each factor and the differences of items between each factor on the CAEBS, it was anticipated that the factor structure identified in the pilot study would be maintained in the current study.

In addition, the mean factor endorsements were compared to that of the prior study using MANOVAs and F-tests to determine what differences exist between the samples used in the two

studies. While these samples differed in many ways, this comparison could provide clues about the measure and/or participants' responses. Based on the results from the prior study indicating factor-means correlated with treatment history, it was expected that the participants in the present study, who were seeking or engaged in mental health services would show lower mean endorsements on the factors reflecting support for policies mandating EBP usage and practical barriers to choosing EBPs.

The current study also aimed to determine whether a wider variety of potential respondent characteristics were associated with attitudes towards EBPs. A demographic questionnaire based on the Child and Adolescents Service Assessment (CASA), developed by Ascher, Farmer, Burns, and Angold (1996), was used to measure aspects of treatment seeking and involvement with the mental health care system, along with demographic variables that may have influenced participants' attitudes towards EBPs. Three areas of potential correlates of EBPs attitudes were assessed for this study: Level of access to information on EBPs, experience with the mental health care system, and access to EBPs.

Chapter 2: Methods

Participants

Three hundred and eleven adult volunteers recruited from *Craigslist* and *Backpage*, public classified listings in various localities throughout the United States, and *We Search Together*, a search engine connecting participants with mental health concerns with researchers. Six-hundred and sixty-eight people clicked on the link to the questionnaire but 357 did not start the questionnaire. Participants were not excluded based on any demographic information or diagnostic history. Personal correspondences with potential participants (n=28) inquiring about the study indicated that lack of monetary compensation was a motivator in their decision not to participate.

Two hundred twenty-eight (73.1%) participants were female and 12 (3.8%) declined to report their gender. Participants ranged from 18-80 years old (mean age = 39.2 years). Two hundred thirty-two (74.4%) participants were Caucasian, 18 (5.8%) were African American, 3 (1.0%) were American Indian, 6 (1.9%) were Asian, 2 (0.06%) were Native Hawaiian, 9 (2.9%) were Latino, 28 (9.0%) were multiple-ethnicities, 1 (0.3%) was Iranian, and 13(4.2%) did not disclose their ethnicities. Participants' highest levels of education were as follows: 6 (1.9%) did not complete high school, 77 (24.7%) completed high school, 3 (1.0%) completed trade school, 78 (25%) completed a 2-year college degree, 82 (26.3%) completed a 4-year college degree, 43 (13.8%) completed a Master's degree, 7 (2.2%) completed a doctoral degree, and 6 (1.9%) did not state their highest education level achieved.

Measures

Consumer Attitudes towards Evidence Based Services scale (CAEBS; Teh & Mueller). The CAEBS is a 29 item self-report questionnaire that was developed to measure mental health

consumers' attitudes, beliefs, and behavioral intentions towards pursuing treatments that have been supported by scientific evidence. Consumers are asked to rate their agreement to statements that capture different elements of positive and negative attitudes toward EBPs and related topics on a five-point Likert scale from strongly agree to strongly disagree (See Appendix A for a copy of the CAEBS). The previous study by Teh & Mueller (2011) suggests that items of the CAEBS can be organized into five factors. Factor one measures participants' expectations that EBPs would provide benefits beyond other treatment choices. The second factor examines participants' support for large-scale policies supporting EBPs. The third factor assesses cultural concerns regarding EBPs. Factor four describes perceived factors that interfere with consumers pursuing treatments of their choice. Finally, factor five measures concerns about science in determining treatment superiority.

Items taken from the *Child and Adolescent Service Assessment* (CASA; Ascher et al., 1996) and modified were also administered. The CASA was originally designed as a face-to-face interview that can be administered to parents to collect detailed information regarding the mental health treatment history for children and adolescents ages 8-18 and the perceived benefit of said interventions. For the current study, questions from this interview were modified for use as a survey that can be administered to adults seeking treatment for themselves or a loved one (see Appendix C for this modified version and scoring key). Previous studies have suggested that the CASA demonstrates overall good test-retest reliability (Farmer, Angold, Burns & Costello, 1994). However, reliability decreases with the intensity of the services (e.g. hospitalization versus school-based counseling; Farmer et al., 1994). Other studies have shown that the CASA established good concurrent validity in terms of reported service use and documented use from a hospital database (Burns, Angold, Costello & Behar, 1996), although this too was correlated with

service intensity. Ascher and colleagues(1996) suggested that such effects of service intensity on reliability and validity could be a result of a lack of participant understanding as to what types of services would be classified as mental health treatment. In attempts to increase the reliability of said responses in the current study, items that would help determine service intensity were administered quantitatively rather than as open-ended, qualitative questions. As items were modified from the original CASA, the reliability and validity of these items may not generalize from those of the original study.

Procedure

An advertisement for this study was posted on *We Search Together*, a website connecting potential participants and researchers in the field of mental health disorders and treatments and *Craigslist* and *Backpage* and was viewable in all localities within all of the states and territories of the United States. *Craigslist* and *Backpage* are both websites hosting classified advertisements on a variety of topics to local consumers. The advertisement was placed under the “Volunteer” section of *Craigslist* and the “Research Participant” section on *Backpage*.

Human Subjects Considerations

The study met criteria for exempt status by the University of Hawaii Committee for Human Studies because of the anonymous nature of the data collected (CHS # 20995). Computer files were encrypted and password protected to maintain the security of any identifying information.

Data Analysis

Missing data was examined and corrected with MPlus Version 6 (Muthen & Muthen, 1998-2010) using Maximum Likelihood method. To evaluate the psychometric properties of the individual CAEBS items in the current sample, means, standard errors,

skewedness and kurtosis were calculated per item with the Statistical Package for the Social Sciences (SPSS) Version 21. Confirmatory factor analyses (CFA) using MPlus Version 6 was conducted on CAEBS items to test if the factor structure uncovered in the pilot study was a good fit with the data obtained from the new sample. The CFA indicated that the model from the pilot study was a poor fit for the current data (see Results). As such, an EFA was conducted with SPSS Version 21 using a Maximum Likelihood extraction and Promax rotation with Kaiser Normalization on the current data to determine if another factor structure would fit the data better.

MANOVAs were used to compare factor means on the CAEBS among individuals who have received previous treatment versus those who have not; those who have access to mental health services versus those who do not, and across demographic variables.

Chapter 3: Results

Two hundred ninety-five (95.6%) participants who completed the questionnaire had a history of receiving mental health services. Of those who had a history of mental health treatment, 143 (48.5%) reported that they had received an EBP, 115 (39.0%) stated that they did not know if they had received an EBP, 33 (11.2%) indicated that the services they received were not EBPs, and 4 (1.4%) did not respond as to whether they received an EBP. Nineteen (6.4%) of those who had received treatment reported that the issues for which they sought help had worsened since the treatment was received, 43 (14.6%) stated that they had not improved, 69 (23.4%) said that they had partially improved, 59 (20%) indicated that their concerns had somewhat improved, 63 (21.4%) reported that they had mostly improved, 41 (13.9%) endorsed complete improvement, and 1(0.3%) did not respond when prompted about improvement. Of participants who had a history of mental health treatment, 119 (40.3%) stated that they were satisfied with their treatment, 186 (56.9%) reported that they were dissatisfied with their treatment, and 8 (2.7%) did not report their satisfaction with services received.

Many participants reported having health insurance that covers treatments for mental health concerns as well as physical health concerns (n=107, 34.3%). Ninety-six (30.8%) participants had health insurance that covers mental health treatment but not as well as physical treatments, 16 (5.1%) had health insurance that does not cover mental health treatment, 30 (9.6%) had health insurance but were unsure about their mental health coverage, 53 (17.0%) were uninsured, and 10 (3.2%) did not report their insurance coverage. Participants tended to have transportation to preferred mental health treatments (n=219, 70.2%). Forty-six participants (14.7%) did not have transportation to any mental health treatments, 31 (9.9%) had transportation to some mental health treatments but not the ones they preferred, and 16 (5.1%)

did not indicate their transportation availability. Participants stated that they received information about mental health treatment options online (n=182, 58.3%), from a professional helper, such as a therapist or a physician (n=23, 71.5%), from talking to friends or family members (n=151, 48.4%), and other sources, such as books and talking to peers in group therapy (n=44, 14.1%).

Figure 1

Scree Plot of Exploratory Factor Analysis

The CFA conducted to determine the fit of the current data to the model proposed by the pilot study showed a high chi-square value, $\chi^2(367, N=312) = 1865.166, p < .001$, RMSEA=.115 (90% CI = .110, .120), and a low CFI value (CFI=.60), suggesting that the model was a poor fit for the current data. The Model Modification Indices indicated that a substantial number of adjustments to this model would be needed in order to approximate good fit. As such, an EFA was conducted using a promax rotation and the Maximum-Likelihood estimation method.

The Maximum-Likelihood estimation of items that loaded highly on the factor pattern matrix with the EFA suggested that a 4-factor solution would be a more appropriate fit for the current data and the scree plot indicated that these four factors explained 52.09% of the variance

observed in the CAEBS data (see Figure 1). This solution allowed for 26 of the original 29 items to be retained (see Table 1). Six items loaded highly on Factor 1 in the factor pattern matrix after the promax rotation. In general, these items described positive value beliefs regarding therapists' use of evidence-based practices ($M = 3.88$, $SD=0.97$). The highest loading item on factor 1, "Beliefs Regarding Therapists' Practices" was "People benefit when therapists carefully track their treatment progress." The five items that loaded highly on Factor 2 mostly appear to be exemplars of emotionally loaded attitudes related to pro-EBS mental health policy ($M = 2.56$, $SD=1.15$). The item that loaded highest on this "Attitudes about Mental health Policy" factor was "If a therapist failed to use an EBP on me, I would consider filing a suit." Nine items mostly describing negative attitudes towards EBPs for individual treatment loaded highly on Factor 3 ($M = 2.91$, $SD=1.13$). The item that loaded highest on this "Negative Micro-Level Attitudes towards EBPs" factor was "I am unsure whether EBPs can address my individual needs." Factor 4 showed five high factor loadings for items detailing general negative attitudes towards EBPs ($M = 3.75$, $SD=0.95$). The item that loaded highest on this "Negative Macro-Level Attitudes towards EBPs" factor was "Some EBPs may conflict with certain cultural values." Factor inter-correlations ranged from $r = .45$ (between "Beliefs Regarding Therapists' Practices" and "Attitudes about Mental Health Policy" factors) to $r = .03$ (between "Beliefs Regarding Therapists' Practices" and "Negative Micro-Level Attitudes towards EBPs" factors; see table 2).

MANOVAs and ANOVAs on auxiliary variables across Bartlett factor mean scores for all factors failed to indicate significant differences among factor means for participants with or without a history of psychological treatment, males versus females, or as a function of age or health insurance coverage, as measured by the extent to which participants' insurance covered

the cost of mental health services as compared to coverage for physical health care. Ethnicity of the sample was too homogeneous to determine its effect on factor mean scores.

An ANOVA predicting Bartlett mean factor scores per factor by history of EBP indicated that participants who reported having received an EBP showed a significant between-group difference on the Negative Micro-Level Attitudes towards EBPs factor, $F(1, 284)=3.63, p=.028$ and on the Negative Macro-Level Attitudes towards EBPs factor, $F(1,284)=3.68, p=.026$. Subsequent post hoc Tukey's tests suggested that participants who had a history of receiving an EBP ($M= 2.85, SD=.64$) scored significantly higher on the Negative Micro-Level Attitudes towards EBPs factor than participants who had received mental health services before but never an EBP ($M=2.95, SD=.68$; see Table 3). A Tukey's test indicated that those who had a history of mental health treatment but no history of receiving an EBP ($M=3.85, SD=.85$) scored lower on the Negative Macro-Level Attitudes towards EBPs factor than participants whose treatments were supported by evidence ($M=3.83, SD=.66$; see Table 3). An ANOVA across Bartlett factor mean scores by levels of change following treatment indicated a significant between-group difference on the Negative Micro-Level Attitudes towards EBPs factor $F(5, 284)=6.1, p<.001$.

Table 1

CAEBS Means, Standard Deviations, and Factor Patterns (Factor Loadings) per Item (highest loading/item bolded) in a Public Online Sample (N=312)

<u>Item</u>	<u>Mean</u>	<u>SD</u>	<u>Factor 1</u>	<u>Factor 2</u>	<u>Factor 3</u>	<u>Factor 4</u>
People benefit when therapists carefully track their treatment progress.	4.10	.89	.828	-.076	-.016	.066
A good therapist will use treatments that have been	4.05	.90	.820	-.089	-.068	.070

supported by evidence.						
I would be sure to try an EBP before a non-EBP.	3.31	1.05	.468	.212	.083	-.126
EBPs provide hope for people suffering from mental health problems.	2.85	1.24	.577	.157	.022	-.018
The use of EBPs will improve mental health services.	3.62	1.04	.620	.050	.050	-.004
Mental health therapists who engage in other treatments when an EBP is available should be held accountable for any negative outcomes.	3.86	1.09	.781	.025	-.025	.030
When choosing a mental health treatment, the evidence base is more important than my therapist's opinion.	3.92	.94	.223	.469	.004	.081
Only therapists using EBPs should be allowed to treat mental health problems.	3.10	1.18	.639	-.089	.092	.093
States should not license therapists who will do other treatments when an EBP for the problem has been identified.	4.31	.89	.039	.858	-.041	.046
If a therapist failed to use an EBP on me, I would consider filing a suit against them.	2.49	1.16	-.034	.915	-.045	.040
Insurance companies should only reimburse therapists who use EBPs.	2.53	1.17	-.030	.640	.135	-.059
EBPs might be too expensive for me.	2.26	1.10	-.053	.805	-.010	.003

<u>Item</u>	<u>Mean</u>	<u>SD</u>	<u>F1</u>	<u>F2</u>	<u>F3</u>	<u>F4</u>
I don't feel comfortable making treatment decisions.	3.20	1.05	.162	.065	.523	.016
Treatment options overwhelm me.	3.11	1.12	.209	.091	.483	-.049
Information about my problem is too hard for me to understand.	2.97	1.27	.108	.262	.471	-.169
Scientific studies often have other agendas besides helping people.	2.33	1.18	.026	-.089	.516	.103
I am unsure whether EBPs can address my individual needs.	3.35	1.16	-.007	-.214	.714	-.068
Regardless of what the evidence says, I know what works best for me.	2.91	1.06	-.288	.154	.596	.134
Scientific studies cannot show that treatment works for the long term.	2.63	1.11	-.252	-.028	.514	.149
Scientific studies get in the way of freedom of choice.	2.63	1.16	-.044	.027	.033	.790
Some EBPs might conflict with certain cultural values.	3.74	.94	-.010	.086	-.088	.976
EBPs might not be accepted by all cultures.	3.89	.90	.098	.042	-.045	.827
All cultures might not believe in EBPs.	3.89	.86	.127	-.072	.187	.435
It would be difficult to make sure all therapists use EBPs.	3.76	1.0	.074	-.108	.162	.429
EBPs do not address the reasons why I have problems.	3.04	1.11	-.151	-.090	.603	.092

Note: Factor names: Factor 1: Beliefs Regarding Therapists' Practices

Factor 2: Attitudes about Mental Health Policy

Factor 3: Negative Micro-Level Attitudes towards EBPs

Factor 4: Negative Macro-Level Attitudes towards EBPs

Note: Items were responded to on a five-point Likert Scale, ranging from “strongly disagree” to “strongly agree.”

Participants who reported that their symptoms had completely improved ($M=2.93$, $SD=.66$) or mostly improved ($M=2.67$, $SD=.57$) scored significantly lower on the Negative Micro-Level Attitudes towards EBPs factor than those who endorsed a deterioration ($M=3.27$, $SD=.82$), no change ($M=3.13$, $SD=.64$), or a partial change in symptoms ($M=3.08$, $SD=.62$) according to post-hoc Tukey's tests, (see Table 4). An ANOVA across Bartlett factor means for all factors and satisfaction with prior treatment indicated a significant difference between levels of satisfaction on the Attitudes about Mental Health Policy factor, $F(1, 294)=4.71$, $p=.031$, and the Negative Micro-Level Attitudes towards EBPs factor, $F(1, 294)=10.12$, $p=.002$. Post-hoc Tukey's tests suggested that people who received mental health treatments and were satisfied with the treatment they received ($M=2.44$, $SD=.9$) scored significantly lower on The Attitudes about Mental Health Policy factor than participants who endorsed dissatisfaction with their previous treatment ($M=2.73$, $SD=.93$). According to post-hoc Tukey's tests, participants who indicated satisfaction with their previous treatments ($M=2.83$, $SD=.65$) scored significantly lower on the Negative Micro-Level Attitudes towards EBPs factor than those dissatisfied with their treatment ($M=3.05$, $SD=.69$; see Table 5).

Table 2

Factor Intercorrelations

<u>Factor</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
1				
2	.454			
3	-.028	.032		
4	.239	-.212	.289	

Note: Factor names: Factor 1: Beliefs Regarding Therapists' Practices
 Factor 2: Attitudes about Mental Health Policy
 Factor 3: Negative Micro-Level Attitudes towards EBPs
 Factor 4: Negative Macro-Level Attitudes towards EBPs

Table 3

Means and SDs for Bartlett Mean Factor Scores Significantly Different Between Categories for History of EBP According to MANOVAs and ANOVAs

	<u>N</u>	<u>Mean (SD)</u>			
		<u>F1</u>	<u>F2</u>	<u>F3</u>	<u>F4</u>
Yes	142	3.96 (.68)	2.50 (.90)	2.85(.64) _a	3.83(.66) _a
No	33	3.79 (.93)	2.72 (1.18)	3.11 (.86) _{ab}	3.65 (.76) _b
Don't Know	115	3.85 (.65)	2.56 (.88)	2.95 (.68) _b	3.85 (.85) _{ab}

Note: Within columns and rows as indicated means that do not share subscripts differ at the $p < .05$ level

Note: Factor names: Factor 1: Beliefs Regarding Therapists' Practices
 Factor 2: Attitudes about Mental Health Policy
 Factor 3: Negative Micro-Level Attitudes towards EBPs
 Factor 4: Negative Macro-Level Attitudes towards EBPs

Table 4

Means and SDs for Bartlett Mean Factor Scores Significantly Different Between Categories for Change in Symptoms According to MANOVAs and ANOVAs

	<u>N</u>	<u>Mean (SD)</u>			
		<u>F1</u>	<u>F2</u>	<u>F3</u>	<u>F4</u>
Got Worse	19	3.65 (.94)	2.52 (1.15)	3.27 (.82) _a	3.66 (.93)
Did not Improve	42	3.92 (.66)	2.43 (.98)	3.13 (.64) _a	3.58 (.77)
Partially Improved	68	3.97 (.67)	2.66 (.89)	2.76 (.74) _{ab}	3.86 (.70)
Somewhat Improved	59	3.87 (.52)	2.62 (.92)	3.08 (.62) _a	3.88 (.69)
Mostly Improved	62	3.94 (.68)	2.66 (.89)	2.67(.57) _b	3.67 (.70)
Completely Improved	40	3.80 (.91)	2.62 (1.04)	2.93(.66) _b	3.76 (.73)

Note: Means that do not share subscripts differ at the $p < .05$ level

Note: Factor names: Factor 1: Beliefs Regarding Therapists' Practices
 Factor 2: Attitudes about Mental Health Policy
 Factor 3: Negative Micro-Level Attitudes towards EBPs
 Factor 4: Negative Macro-Level Attitudes towards EBPs

Table 5

Means and SDs for Bartlett Mean Factor Scores Significantly Different Between Categories for Satisfaction with Treatment According to MANOVAs and ANOVAs

	<u>N</u>	<u>Mean (SD)</u>			
		<u>F1</u>	<u>F2</u>	<u>F3</u>	<u>F4</u>
Satisfied	167	3.89 (.71)	2.44(.90) _a	2.83(.65) _a	3.82 (.71)
Unsatisfied	119	3.94 (.63)	2.73 (.93) _b	3.05 (.69) _b	3.69 (.70)

Note: Means that do not share subscripts differ at the $p < .05$ level

Note: Factor names: Factor 1: Beliefs Regarding Therapists' Practices
 Factor 2: Attitudes about Mental Health Policy
 Factor 3: Negative Micro-Level Attitudes towards EBPs
 Factor 4: Negative Macro-Level Attitudes towards EBPs

According to an ANOVA across Bartlett factor means on all factors and availability of transportation, a significant difference was found for the Negative Micro-Level attitudes towards EBPs factor at different levels of availability of transportation, $F(2, 293) = 6.12, p=.002$. Post-hoc Tukey's tests indicated that participants with access to transportation to preferred mental health treatment services ($M=2.85, SD=.63$) showed a lower mean endorsement of items on the Negative Micro-Level Attitudes toward EBPs factor than participants who had access to transportation to non-preferred treatment services only, ($M=3.24, SD=.59$; see Table 6). Level of highest educational achievement predicted the Beliefs Regarding Therapists' Practices factor mean item scores according to an ANOVA comparing highest level of education across Bartlett factor mean scores for each factor, $F(6,294=2.27), p=.04$. Post-hoc Tukey's tests indicated that individuals with a bachelor's degree as their highest level of education ($M=4.01, SD=.55$) showed a significantly higher mean endorsement of items on The Beliefs Regarding Therapists' Practices factor than participants with a master's degree ($M=3.65, SD=.86$; see Table 7).

Table 6

Means and SDs for Bartlett Mean Factor Scores Significantly Different Between Categories for Availability of Transportation According to MANOVAs and ANOVAs

	<u>N</u>	<u>Mean (SD)</u>			
		<u>F1</u>	<u>F2</u>	<u>F3</u>	<u>F4</u>
No Transportation	46	3.87 (.73)	2.65 (.96)	3.10 (.85) _{ab}	3.67 (.82)
Transportation to Non-preferred Sites	31	3.93 (.54)	2.54 (.84)	3.24 (.59) _a	3.87 (.70)
Transportation to Preferred Sites	219	3.92 (.69)	2.55 (.93)	2.85(.63) _b	3.78 (.70)

Note: Means that do not share subscripts differ at the $p<.05$ level

Note: Factor names: Factor 1: Beliefs Regarding Therapists' Practices
Factor 2: Attitudes about Mental Health Policy

Factor 3: Negative Micro-Level Attitudes towards EBPs
 Factor 4: Negative Macro-Level Attitudes towards EBPs

Table 7

Means and SDs for Bartlett Mean Factor Scores Significantly Different Between Categories for Highest Level of Education According to MANOVAs and ANOVAs

	<u>N</u>	<u>Mean (SD)</u>			
		<u>F1</u>	<u>F2</u>	<u>F3</u>	<u>F4</u>
Less than High School	10	3.86 (.55) _{ab}	2.82 (.88)	2.71 (.67)	3.68 (.58)
High School	77	3.83 (.77) _{ab}	2.55 (1.05)	3.08 (.72)	3.65 (.89)
Trade School	78	3.95 (.59) _{ab}	2.48 (.84)	3.00 (.61)	3.81 (.66)
Bachelor's Degree	82	4.01 (.55) _a	2.74 (.89)	2.76 (.72)	3.79 (.57)
Master's Degree	44	3.65(.86) _b	2.39 (.88)	2.87 (.66)	3.88 (.75)
Doctorate Degree	7	3.82 (.73) _{ab}	2.54 (1.12)	2.95 (.51)	3.70 (.55)
Other	3	4.52 (.59) _{ab}	2.40 (.92)	2.81 (.28)	4.20 (.80)

Note: Means that do not share subscripts differ at the $p < .05$ level

Note: Factor names: Factor 1: Beliefs Regarding Therapists' Practices
 Factor 2: Attitudes about Mental Health Policy
 Factor 3: Negative Micro-Level Attitudes towards EBPs
 Factor 4: Negative Macro-Level Attitudes towards EBPs Discussion

Chapter 4: Discussion

The results indicate that the factor structure from the pilot study did not generalize to the current nationwide sample of adult online volunteers. The subsequent EFA suggested that a four factor model provided a better fit for the current data. These four factors appear to measure: participants' beliefs about therapists' practices and expectations with regards to which practices are appropriate; emotionally-loaded attitudes towards consequences for EBP and non-EBP use by therapists; negative attitudes about EBPs as they pertain to the individuals surveyed; and negative attitudes regarding EBP use in society. This four-factor model allowed for the majority of the items that had loaded highly on the factors from the model obtained in the pilot study to be retained.

The majority of the items that loaded on the factor describing preferences for EBPs above other treatments in the previous study loaded highly on the Beliefs Regarding Therapists' Practices factor in the current study. Most of the items from the factor describing support for policy use mandating EBPs in the pilot study loaded on to the Attitudes about Mental Health Policy factor in the current study. The items using personal pronouns (e.g. "I" and "me") from the factors measuring barriers constraining treatment options and concerns about the scientific validity of EBPs from the previous study merged to create the Negative Micro-Level Attitudes towards EBPs factor in the current study. The items that referred to larger groups (e.g. cultures) or themes in general (e.g. science) from the factors describing practical barriers to treatment choices, concerns about the validity of EBPs, and concerns regarding the cultural applicability of EBPs merged to form the Negative Macro-Level Attitudes towards EBPs factor in the current study. It seems that participants in the current sample viewed their negative beliefs towards EBPs

according to the level at which each concern affected them rather than thematically, as participants may have endorsed such beliefs in the previous study.

Some of the sample characteristics appeared to affect factor means in the current study. Participants who responded that their highest level of education was a Master's degree showed less of an endorsement towards items on the Beliefs Regarding Therapists' Practices factor than those who responded that a Bachelor's degree was their highest level of education. Those who were unsatisfied with their previous mental health treatment appeared to be more in favor of adopting policies mandating EBP use. Endorsement of items on the Negative Macro-Level Attitudes towards EBPs factor seemed to be influenced by history of receiving an EBP, change in the severity of mental health symptoms since the time of treatment, satisfaction with past treatments, and availability of transportation. Participants who knew that their treatments were not EBPs most highly endorsed personal concerns regarding EBPs, followed by participants who did not know if their treatments were EBPs or not, and finally by participants receiving EBPs. This may be a reflection of the messages that therapists gave to participants regarding EBPs and their relationship to the level of evidence supporting the practices that the therapists themselves used with participants. Participants for whom treatment was mostly or completely successful endorsed a lower level of Negative Micro-Level Attitudes towards EBPs than participants who did not experience a large degree of positive change in symptoms following mental health treatment. Those who reported access to transportation to preferred treatment sites showed less negative attitudes towards EBPs at a personal level. Participants who had received an EBP in the past indicated a lower level of Negative Macro-Level Attitudes towards EBPs than those who had not received EBPs in the past.

Many of the participants in the current study used the opportunity to discuss their experiences with past treatments in the qualitative field of the question on satisfaction with previous therapies to discuss at great lengths their views towards the quality of care they received. Although a detailed examination of these data is beyond the scope of this study, it appears that the therapeutic relationship was commonly raised as a reason for participants to be dissatisfied but not satisfied with their past treatment experiences. Success in decreasing symptoms seems to have been the most common reason for participants to have been satisfied with therapy. Participants' responses to the qualitative question on treatment satisfaction appeared to indicate that this was an important topic for them and that they wanted to be empowered and informed decision makers within their own mental health interventions.

A possible explanation for why the factor structure obtained in the pilot study was a poor fit for the data obtained in the current study is with regards to sample characteristics. Participants in the current sample reported a substantially higher degree of interaction with the mental health treatment system and most participants endorsed receiving mental health treatment from multiple sources. These treatments appeared to be varied in the degree of success they achieved for participants, the level of scientific support they were based upon, and the degree to which participants were satisfied with said interventions. Participants of the current study were also obtained from a larger geographic area than those from the pilot study yet they were less ethnically diverse. This may have explained why concerns regarding cultural applicability arose as a separate factor in the pilot study but not in the current study. The age range of participants was substantially larger in the current study than in the previous study, which may have partially accounted for the wider range of treatment experiences endorsed by current participants.

Another potential explanation for the shift in factors obtained may have involved the motivation that participants had for participating in the respective studies. Participants in the pilot study participated primarily in order to receive course credit. They were not necessarily interested in the topic of the study and many of them stopped responding to questionnaire items before completing the CAEBS. As participants in the current study were not externally compensated in order to maintain anonymity, it is likely that many of them participated due to a personal interest in the study topic. This appears to be supported by the amount and nature of personal opinions that many participants included in the qualitative field of the question on satisfaction with past treatment experiences. Participants in the current study also were only administered those items that loaded highly onto the factors obtained from the pilot study to minimize the time commitment necessary from participants. This may have attracted more participants who did not have a sufficient amount of time to commit to a lengthy study.

There was a small correlation between the Attitudes towards Mental Health Policy and Negative Micro-Level Attitudes towards EBPs factors, suggesting that participants endorsing negative attitudes regarding the ability of EBPs to meet their individual needs might be slightly more likely than others to endorse concerns about the impact that EBPs could have on society as a whole. There were small to moderate correlations between the Beliefs regarding Therapists' Practices, Attitudes towards Mental Health Policy, and Negative Macro-Level Attitudes towards EBP factors. This indicates that those who show concern with societal issues regarding EBPs may also be slightly more likely than those without such concerns to encourage the use of EBPs by mental health therapists while opposing policy measures mandating EBPs use.

Implications

The factor structure obtained in this study suggests that people who have a history of consuming mental health services may view EBPs in a relatively simple and organized manner. For those attitudes that are positive towards EBPs, the emotional valence of the particular attitudes appears to be important in organizing consumers' thoughts. Item and factor means indicate that consumers might value the use of EBPs and careful tracking of treatment progress in making treatment decisions. At the same time, consumers may feel less strongly about implementing policies to legally mandate clinicians to use EBPs and to hold them accountable to consumers via lawsuits for failure to use EBPs. There was a positive correlation between the Beliefs regarding Therapists' Practices and Attitudes towards Mental Health Policy factors. This could indicate that those who value EBPs usage as an important factor in making treatment decisions might be more likely to endorse legal mandates and consequences for therapists regarding their choice of interventions and the respective evidence base supporting the use of those treatments. Results from the EFA indicate that consumers may primarily view negative attitudes towards EBPs either at the individual or societal level.

The item and factor-level means from this study suggest that overall there is a strong level of trust of EBPs amongst consumers, which may contribute to demand for such services in practice settings. However, at the same time, consumers may weigh this trust with concerns about the ability of EBPs to meet both individual and societal-level demands of consumers. The high proportion of consumers who indicated they did not know whether their previous treatment was an EBP also suggests that consumers may lack the understanding of the nuances required to determine whether or not an intervention qualifies as evidence based.

Participants in the current study endorsed collecting information on mental health treatment options primarily from a professional helper, such as a mental health therapist, and most participants also reported searching for information about mental health treatments online. Both of these methods of searching for information can be concerning with regards to the quality of the information consumers may be receiving on EBPs. With reference to information from therapists, Kazdin (2005) reported that the majority of treatment services offered in community settings are not EBPs while Aarons and colleagues (2004; 2007) found that most therapists tend to hold a variety of concerns about EBPs that are often contrary to evidence from scientific studies. In light of the findings from Oh et al. (2009) that websites on mental health treatments rarely provide sufficient information to evaluate the evidence base of an intervention, this method of searching for treatment options might also be challenging for consumers seeking information on EBPs for mental health concerns. It is likely that some of these sources of information may have influenced the public perception on EBPs and may have increased distrust in the ability of EBPs to address the needs of individuals and societies in which EBPs are provided. The growing popularity of organizations, such as the National Alliance on Mental Illness (NAMI), specializing in offering information to the public about evidence based practices for mental health problems and how to evaluate the evidence base of their treatments is a positive step towards public education on EBPs. It is hoped that these advocacy groups will continue to provide information and advocacy to those suffering from mental illness so as to increase the consumer voice in shaping the extent to which EBPs are supplied in all forms of treatment settings accessible to the public.

Limitations

One of the major limitations of this study is that we were not able to obtain a sample as diverse as we originally expected. Participants were much less ethnically diverse than in the previous study. In addition to participants with a history of mental health treatment, we were hoping to recruit a sufficient number of participants who were looking into treatment options for the first time. Few of the participants we obtained for the current study had not received any mental health interventions. Participants also appeared to be more educated than the general population, as well as having more access to transportation and insurance, which taken together could be indicators of a higher socio-economic status than we originally anticipated. As such, the extent to which the results from the current study can be generalized to all consumers is limited.

Another potential limitation of the current study is that it only assessed participants' responses to the 29 items that loaded highly on the five factors uncovered in the pilot study. Since the factor pattern obtained with data from the pilot study did not generalize to the data from the current study, it is possible that those items that did not load highly on any of the 5 factors in the previous study could have loaded with other factors in the current sample. The present items were also developed without consultation with economists on how current theories may enrich our understanding of the economic pressures that may inform consumer decisions with regards to mental health services. It is possible that a more nuanced understanding of modern economic theories could inform the development of new items. These items may better represent the economic influences on consumer decision making in mental health treatment amongst consumers.

Additionally, the order of the items presented was not randomized. It is possible that order effects may have contributed to the results obtained in the current study. Correlations between item number difference scores and correlations between items at various locations

between factors were investigated to rule out the possibility of order effects. A correlation of $r(46) = .18$ ($p = .12$) was calculated, suggesting a small effect of item order in this sample.

Directions for future research

To address the said limitations of this study, it is suggested that it be replicated while randomizing item order in a larger, more diverse sample, potentially with the use of more items that might relate to consumers' attitudes towards EBPs. Perhaps collaboration between mental health care researchers and economists could help to add items that could increase the degree to which the CAEBS reflects both modern economic theories and attitudes towards mental health services among consumers. Because participants described their experiences with mental health treatment in great detail when responding to the item on their level of satisfaction with previous treatments, it might be worthwhile to systematically explore their reasons for satisfaction and dissatisfaction with mental health treatment. The relationship of participants' experiences with treatment may relate to their attitudes towards EBPs and could help to inform practitioners of ways in which their current interventions could be improved to better address participants' self-described needs.

With regards to further validating the CAEBS, test-retest reliability and convergent and discriminant validity should also be examined by future studies. Due to the nature of some of the CAEBS items, questionnaires measuring attitudes towards science and attitudes towards mental health treatment could be used to establish discriminant validity.

With the recent increase in efforts to engage consumers in directing their own treatment decisions through the DTCA movement and the work of advocacy agencies such as NAMI, it could be possible to evaluate the ability of such interventions to change consumer attitudes

towards EBPs. As different experiences with the mental health system seem to have been associated with positive and negative attitudes towards EBPs in the current study, it is hopeful these efforts to inform and empower participants in treatment making decisions could change consumer attitudes.

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Appendix A

Consumer Attitudes towards Evidence Based Services scale

1. People benefit when therapists carefully track their treatment progress.
2. A good therapist will use treatments that have been supported by evidence.
3. I would be sure to try an Evidence Based Practice before a non-Evidence Based Practice.
4. Evidence based Practices help to show that mental health problems are real.
5. Evidence Based Practices provide hope for people suffering from mental health problems.
6. The use of Evidence Based Practices will improve mental health services.
7. Mental health therapists who engage in other treatments when an Evidence Based Practice is available should be held accountable for any negative outcomes.
8. When choosing a mental health treatment, the evidence base is more important than my therapist's opinion.
9. Only therapists using Evidence Based Practices should be allowed to treat mental health problems.
10. States should not license therapists who will do other treatments when an Evidence Based Practice for the problem had been identified.
11. If a therapist failed to use an Evidence Based Practice on me, I would consider filing a suit against them.
12. Insurance companies should only reimburse therapists who use Evidence Based Practices.
13. Evidence Based Practices might be too expensive for me.
14. I don't know how to tell if a treatment is evidence based.

15. My insurance might not pay for Evidence Based Practices.
16. I don't feel comfortable making treatment decisions.
17. Treatment options overwhelm me.
18. Information about my problem is too hard for me to understand.
19. Scientific studies often have other agendas besides helping people.
20. I am unsure whether Evidence Based Practices can address my individual needs.
21. Evidence Based Practices do not address the reasons why I have problems.
22. Regardless of what the evidence says, I know what works best for me.
23. Scientific studies cannot show that treatment works for the long term.
24. Scientific studies get in the way of freedom of choice.
25. Some Evidence Based Practices might conflict with certain cultural values.
26. Evidence Based Practices might not be accepted by all cultures.
27. All cultures might not believe in Evidence Based Practices.
28. It would be difficult to make sure that all therapists use Evidence Based Practices.
29. Evidence Based Practices are not applicable to all cultures.

Appendix B

CAEBS Item Means and Factor Patterns from Pilot Study

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
People benefit when therapists carefully track their treatment progress.	4.02				
A good therapist will use treatments that have been supported by evidence.	3.79				
I would be sure to try an EBP before a non-EBP.	3.78				
EBPs help to show that mental health problems are real.	3.77				
EBPs provide hope for people suffering from mental health problems.	3.74				
The use of EBPs will improve mental health services.	3.73				
Mental health therapists who engage in other treatments when an EBP is available should be held accountable for any negative outcomes		3.57			
When choosing a mental health treatment, the evidence base is more important than my therapist's opinion		3.43			
Only therapists using EBPs should be allowed to treat mental health problems.		3.38			
States should not license therapists who will do other treatments when an EBP for the problem has been identified.		3.10			
If a therapist failed to use an EBP on me, I would consider filing a suit against them.		3.09			

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Insurance companies should only reimburse therapists who use EBPs.		2.66			
EBPs might be too expensive for me.			3.57		
I don't know how to tell if a treatment is evidence based.			3.43		
My insurance company might not pay for EBPs			3.38		
I don't feel comfortable making treatment decisions.			3.10		
Treatment options overwhelm me.			3.09		
Information about my problem is too hard for me to understand.			2.66		
Scientific studies often have other agendas besides helping people.				3.50	
I am unsure whether EBPs can address my individual needs.				3.33	
EBPs do not address the reasons why I have problems.				3.07	
Regardless of what the evidence says, I know what works best for me.				3.05	
Scientific studies cannot show that treatment works for the long term.				2.92	
Scientific studies get in the way of freedom of choice.				2.85	
Some EBPs might conflict with certain cultural values.					3.84
EBPs might not be accepted by all cultures.					3.83
All cultures might not believe in EBPs.					3.75
It would be difficult to make sure all therapists use EBPs.					3.56
EBPs are not applicable to all cultures.					3.44

Note: factor names: Factor 1: Trust in the Benefits of EBPs

Factor 2: Radical Support of EBP Implementation

Factor 3: Barriers to Consumer Empowerment

Factor 4: Skepticism about Science

Factor 5: Cultural Incompatibility Concerns

Appendix C

Demographic Questionnaire based on the Child and Adolescent Service Assessment

1. Have you ever used **mental health** services provided by a
 - ☐ Hospital psychiatric unit
 - ☐ Alcohol/drug rehabilitation clinic
 - ☐ Group home or emergency shelter
 - ☐ Crisis center
 - ☐ Psychiatrist, psychologist, social worker, or psychiatric nurse in private practice
 - ☐ College counseling center
 - ☐ Family doctor
 - ☐ Rabbi, priest, minister or other religious counselor
 - ☐ Herbalist
 - ☐ Self-help group, like AA or NA
 - ☐ Other mental health care provider _____
 - ☐ None
2. To your knowledge, were the **mental health** services you received supported by science?
 - ☐ Yes
 - ☐ No
 - ☐ Don't know
3. How has the problem you sought help for changed?
 - ☐ No longer a problem
 - ☐ Improved
 - ☐ Stayed the same

- ☐ Gotten worse
- 4. Were you satisfied with your **mental health** treatment?
 - ☐ Yes
 - Why? _____
 - ☐ No
 - Why not? _____
- 5. Does your insurance cover **mental health** treatment?
 - ☐ Fully
 - ☐ Partially
 - ☐ Not at all
 - ☐ I do not have insurance
- 6. Is it difficult for you to get to a **mental health** treatment site?
 - ☐ Yes
 - Why? _____
 - ☐ No
- 7. Are there **mental health** service you would like to use that are not available where you live?
 - ☐ Yes
 - Specify _____
 - ☐ No
- 8. How have you gotten information on **mental health** services so far?
 - ☐ Online
 - ☐ From a health care/mental health care professional like a doctor or counselor

- ☐ Talking to family or friends
- ☐ Other _____

9. What is your highest level of education completed?

- ☐ Graduate school
- ☐ 4-year college
- ☐ 2-year college
- ☐ High school
- ☐ Other _____

10. Gender

- ☐ Male
- ☐ Female

11. Age _____

12. What is your biological ethnicity? Please click all that apply

- ☐ Caucasian
- ☐ Black or African American
- ☐ American Indian
- ☐ Alaskan Native
- ☐ Asian
- ☐ Native Hawaiian
- ☐ Pacific Islander
- ☐ Hispanic or Latino
- ☐ Other (Specify: _____)

Scoring Guide for the Demographic Questionnaire

- 1) Previous mental health treatment: any item other than none = 1, none = 0
- 2) Previous EBP: Yes = 2, no = 1, don't know = 0
- 3) Success of previous mental health treatment: no longer a problem = 3, improved = 2, stayed the same = 1, got worse = 0
- 4) Satisfaction with previous mental health treatment: Yes = 1, no = 0
- 5) Access to treatment (financial): Fully = 2, Partially = 1, Not at all = 0, I do not have health insurance = 0
- 6) Access to treatment (transportation): Yes = 0, No = 1
- 7) Access to treatment (location): Yes = 0, No = 1
- 8) Sources of information (categorical)
- 9) Access to information (education): Graduate = 4, 4-year college = 3, 2-year college = 2, High School = 1, less than high school (see other) = 0
- 10) Gender (categorical)
- 11) Age (continuous)
- 12) Ethnicity (categorical)