

# Empirically Supported Treatments in Rural Community Mental Health Centers: A Preliminary Report on Current Utilization and Attitudes Toward Adoption

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**Abstract** Rural community mental health centers (CMHCs) face numerous problems that might be alleviated by the dissemination of empirically supported treatments (ESTs). The current study lays the groundwork for EST dissemination by examining current treatment practices in rural clinics as well as the attitudes of decision makers toward ESTs and perceived barriers to their adoption. Twenty-five rural and 38 non-rural clinical directors responded to a mailed survey. Rural respondents were as likely as non-rural respondents to report EST use in their clinic for most anxiety disorders, and more likely to report use of an EST for major depressive disorder and obsessive-compulsive disorder. However, ESTs represent a relatively small proportion of the treatments reported for depression and anxiety disorders. Attitudes toward manualized ESTs did not differ between groups. Further, rural and nonrural clinics did not see the barriers to the adoption of ESTs as insurmountable. These preliminary results suggest that rural CMHCs are open to the use of ESTs and should be included in widespread dissemination initiatives.

**Keywords** Rural environments ·  
Evidence-based practices ·  
Community mental health services · Psychologists

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## Introduction

Rural mental health service systems are beset by a number of problems, including shortages of mental health professionals per capita, insufficient budgets, perceived stigma associated with mental illness and help-seeking among rural consumers, and inadequate integration between primary care and specialty mental health services (Goldsmith et al. 1997; Hartley et al. 1998; Hoyt et al. 1997; Merwin et al. 2003). Given these problems, accountability is especially important in the rural mental health service system. Psychotherapeutic treatments need to be short-term, problem-focused interventions with demonstrated efficacy. Jameson and Blank (2007) suggest that the utilization of empirically supported treatments (ESTs) in rural community mental health center (CMHCs) may prove particularly beneficial and in fact relieve some of these issues because ESTs tend to possess these characteristics. Moreover, ESTs are by definition manualized in detail, a feature which limits training costs and promotes the feasibility of adoption in rural clinics.

ESTs are treatments that have shown to be efficacious in multiple well-designed randomized controlled trials (Chambless and Hollon 1998). Although ESTs show great promise, many have suggested that research on the efficacy of psychological treatments should be interpreted with caution. There is concern about the extent to which ESTs will effectively translate to community practice (Borkovec and Castonguay 1998; Chambless and Hollon 1998; Goldfried and Wolfe 1998; Stirman et al. 2005; Westen et al. 2004). However, there is reason to be optimistic that ESTs can be successfully translated from research environments to CMHCs (see Hunsley and Lee 2007, for a review).

The present study explores some of these issues in order to inform the design of dissemination efforts. We chose to

limit the focus of the study to depression and anxiety disorders because of the high prevalence rates of these disorders. The study had two primary objectives. Firstly, we wished to examine the current utilization of ESTs in rural CMHCs as compared to non rural CMHCs. Secondly, we wished to examine decision makers' attitudes toward manualized, research-based psychotherapeutic treatments and the barriers they perceived toward their utilization.

## Methods

### Rural and Non Rural Definitions

For the purpose of this study, CMHCs were considered rural if their mailing address was in a county containing an urban population of <20,000 and not adjacent to a metropolitan area, coinciding with county codes 7 and 9 of the United States Department of Agriculture Economic Research Service's Rural-Urban Continuum Codes (United States Department of Agriculture Economic Research Service 2003). Non rural CMHCs had mailing addresses in counties with an urban population >20,000; adjacency to a metropolitan area was not considered as an exclusion criterion for non rural clinics. This is a fairly stringent definition of rurality; 19% of the US population lives in rural areas, but these most rural counties contain only ~5% of the total U.S. population.

### Definition of ESTs

The current study employed the widely accepted definition of ESTs. Treatments were considered ESTs for given disorder if they were categorized as "well established treatments" for the disorder by Chambless and Ollendick (2001, Table 1). This categorization was based on the aforementioned criteria developed by Chambless and Hollon (1998).

### Survey Description

To reduce participant burden and encourage participation, respondents were asked to provide their best estimates to answer questions rather than to retrieve archival data. Respondents were asked to indicate which treatments were used to treat anxiety and depression in their clinic from a list of 18 treatments. Respondents were allowed to choose up to seven treatments for each disorder to account for differing treatment strategies within the clinic. Respondents listed treatments used for each of the anxiety disorders (panic disorder with agoraphobia, [PDA], panic

disorder without agoraphobia [PD], social phobia [SP], obsessive-compulsive disorder [OCD], posttraumatic stress disorder [PTSD], and generalized anxiety disorder [GAD]) and major depressive disorder (MDD) separately.

Two strategies were employed to examine EST utilization: (a) the reported utilization of at least one EST, and (b) the proportion of ESTs to the total number of treatments reported. We chose to examine utilization in these two ways because each yields unique information. Situations where clinicians within a single CMHC use different treatment approaches for a single disorder are easy to imagine. For example, a hypothetical CMHC might employ seven full-time therapists, each carrying an equal number of cases. One of these seven clinicians uses an EST for the treatment of MDD; the other six use treatments with little or no empirical support. If each therapist has an equal chance of being assigned a new patient with MDD, then that patient has only a one in seven chance of receiving an EST. Calculating ESTs as a proportion of total treatments reported may provide a more accurate (albeit imperfect) metric of overall utilization. However, measuring mere presence of ESTs is also important for laying the groundwork for more widespread dissemination.

To examine perceived barriers to the adoption of ESTs, a brief measure titled the Barriers to Empirically Supported Treatments Questionnaire (BEST-Q)<sup>1</sup> was constructed and included in the survey. A copy of the questionnaire is available from the first author. The BEST-Q was intended to be generic enough to use across a wide variety of disorders, but reflect the essential features of ESTs, based largely on the characteristics of Craske et al. (2000) *Mastery of Your Anxiety and Panic* manual. A brief scenario was constructed describing the opportunity to hold a 2-day on-site workshop in which therapists would learn a new treatment for a common (but unspecified) disorder. The treatment is described as short in course (12 weeks, one 1-h session per week) and manualized in great detail. Further, the hypothetical treatment was described as having shown effectiveness in multiple clinical trials, and had been successfully transported to community settings. Respondents were told that the cost incurred by their CMHC would be \$1,500, including consultation after the workshop. After reading the scenario, staff were asked how likely they would be to encounter barriers to the implementation of this new treatment in four specific domains: staff resistance, consumer resistance, monetary cost, and reimbursement. Respondents judged how likely they are to encounter these barriers on a 7-point Likert-type scale. Based on the responses of 68 participants who completed the BEST-Q, the 12-item total scale showed good internal consistency ( $\alpha = .87$ ) and coefficient alphas for the

<sup>1</sup> Copies of the BEST-Q are available from the John Paul Jameson.

subscales were .52 (consumer resistance), .62, (staff resistance), and .82 (reimbursement concerns) in the sample ( $N = 64$ ). Because the monetary cost subscale consisted of only two items, reliability was assessed using the Spearman-Brown split-half coefficient and found to be adequate ( $r_{SB} = .79$ ; Hulin and Cudeck 2001).

Respondents' attitudes toward ESTs were measured using the Evidence Based Practice Attitudes Scale (EBPAS; Aarons 2004). The EBPAS is a 15-item scale intended to measure attitudes toward the adoption of evidence-based treatments. Respondents rate their agreement with statements reflecting attitudes toward adopting new treatments in four domains: (a) requirements by a governing organization (Requirements), (b) whether the treatment intuitively makes sense (Appeal), (c) openness to new practices (Openness), and (d) beliefs that research-based treatments are irrelevant (Divergence). Agreement is rated on a 5-point Likert scale (0 = not at all; 1 = to a slight extent; 2 = to a moderate extent; 3 = to a great extent; 4 = to a very great extent). Higher item means indicate more positive attitudes toward the adoption of evidence-based treatments. Internal consistency for the EBPAS was found to be adequate in a large sample of practitioners ( $\alpha = .77$ ); the internal consistency of the subscales varied ( $\alpha = .59-.90$ ; Aarons 2004). Internal consistency was also acceptable in the current sample for both the full scale ( $\alpha = .85$ ) and subscales ( $\alpha = .71-.91$ ).

### Participants and Procedure

All materials and methods used in the study were approved by the Institutional Review Board at the University of Pennsylvania. Rural and non rural CMHCs were identified using the Online Mental Health Services Locator provided online by the Substance Abuse and Mental Health Services Administration (SAMSHA 2009). The Online Mental Health Services Locator provides contact information for public and private agencies nationwide. Agencies were considered eligible for participation in the study if they offered mental health services (i.e., not drug treatment or developmental disability services only), provided individual or group psychotherapy, treated adult populations, and did not cater exclusively to forensic populations. Of the 2,631 listings on the site, a total of 89 rural CMHCs were identified nationwide that met these inclusion criteria and had valid contact information listed. These sites were contacted by phone to alert clinical directors to the forthcoming mailing and to confirm the addresses in the listing. A random sample of 339 non rural sites was drawn from 2,264 eligible non rural sites to serve as a comparison group. The survey booklet contained instructions requesting that the clinical director or his/her most knowledgeable

designee complete the survey. Non-respondents were mailed additional study materials after 8 weeks.

Respondents from 25 of the 89 rural CMHCs and 39 of the 339 non rural CMHCs returned a completed survey, a response rate of 28.1 and 11.5%, respectively. Additionally, respondents from five additional clinics returned partially completed surveys but these were excluded from analysis. The probability of returning a completed survey differed significantly between rural and urban clinics ( $\chi^2 [df = 1, N = 428] = 15.25, p < .001$ ), with non rural clinics significantly less likely to respond than rural clinics. The majority of returned questionnaires were completed by clinical directors (71%), with the remainder being completed by service providers (16%) or other clinic staff (13%).

## Results

### Description of CMHCs

Fifty percent ( $n = 32$ ) of respondents described their clinic as a private non-profit CMHC, while 38% ( $n = 24$ ) reported working in a publicly funded clinic. Six percent ( $n = 4$ ) reported that their clinic was a private for-profit clinic; an additional 6% ( $n = 4$ ) did not respond to this item. The majority of respondents (66%;  $n = 42$ ) reported that they worked in a free standing CMHC, while 22% ( $n = 14$ ) reported working in a mental health center attached to a larger health clinic. One respondent reported working in a mental health center located in a hospital, and seven participants did not respond to this item. Clinic size ranged widely both in terms of full-time staff size ( $M = 25.5, SD = 37.57$ ; range = 1–176) and number of patients served per month ( $M = 435.7, SD = 526.16$ ; range = 20–3,840). There were no significant differences in staff size,  $t(57) = 0.10, p = .92, d = .03$  or estimates of patients served per month between rural and urban CMHCs,  $t(62) = 0.21, p = .84, d = .05$ . All of the respondents stated that their CMHC offered individual outpatient therapy or counseling.

### Current Utilization of Empirically Supported Treatments

Firstly, we determined the proportion of clinics reporting use of at least one EST for MDD and the anxiety disorders to determine the extent to which ESTs were *merely present* in CMHCs. Generally, reports of EST utilization were high, with more than 50% of both rural and non rural respondents reporting use of at least one EST for every disorder except OCD. Rural clinics were more likely to report the use of an EST for MDD ( $\chi^2 [df = 1,$

$N = 64$ ] = 6.71,  $p < .01$ ) and OCD ( $\chi^2$  [ $df = 1$ ,  $N = 64$ ] = 5.65,  $p < .05$ ) in their clinics.

To estimate overall rates of EST utilization, the median proportion of ESTs to respondents' total number of reported treatments was calculated for each disorder [range = 0 (OCD)–80% (PD)]. Because these data were not normally distributed, differences between rural and non rural respondents were examined using Mann–Whitney  $U$  tests. Rural clinics did not differ from non rural ones in the proportion of ESTs to total reported treatments for MDD, PD, PDA, PTSD, or SP. Rural clinics reported a higher proportion of ESTs for the treatment of GAD ( $U = 270.5$ ,  $p < .01$ ) and OCD ( $U = 355.0$ ,  $p < .05$ ).

#### Attitudes Toward Manualized Treatment and Barriers to the Implementation of ESTs

EBPAS subscale item means ranged from 2.64 (Openness) to 3.21 (Appeal), indicating that attitudes regarding manualized evidence-based treatments were generally positive. Rural and non rural respondents did not significantly differ on the EBPAS or any of its subscales, indicating similar attitudes toward manualized evidence based therapies. Further, effect sizes of location were negligible or small. To maximize statistical power, rural and non rural groups were collapsed and within subjects ANOVA was used to detect differences between the subscale scores. Because the sphericity assumption was not met, the Huynh–Feldt correction was applied. Subscale scores differences were significant,  $F(2.15, 116.34) = 7.35$ ,  $p < .01$ ,  $\eta^2 = .12$ . Post-hoc Bonferroni adjustments were used to examine specific differences in subscale scores. Scores on the Appeal subscale was found to be significantly higher than those on the Divergence ( $p < .01$ ), Openness ( $p < .01$ ), and Requirements ( $p < .001$ ) subscales, suggesting that ESTs that are intuitive and inherently make sense would be most readily accepted. No differences were detected between the Openness, Divergence, and Requirements subscales.

No between-group differences were found on the BEST-Q or any of its subscales, indicating that rural and non rural clinics face similar issues when considering the adoption of new treatments. As with the EBPAS, groups were collapsed and a within subjects ANOVA employing the Huynh–Feldt correction was used to examine differences between BESTQ subscale scores. Significant differences were detected among the subscales,  $F(2.39, 152.7) = 3.58$ ,  $p > .05$ ,  $\eta^2 = .05$ . Bonferroni adjusted post-hoc comparisons indicated that Reimbursement subscale scores were significantly higher than scores on the Consumer Resistance subscale ( $p < .01$ ). No other differences were detected among BESTQ subscales.

## Discussion

Contrary to the notion that the adoption of cutting edge research-based treatments is an urban phenomenon, rural mental health service systems appear to be at least comparable to their urban counterparts, if not adopting ESTs more readily than their urban counterparts. The results do not suggest that rural systems are at a significant disadvantage in adopting ESTs. Rural decision makers' attitudes toward research-based manualized treatments are no more negative, nor do they perceive the barriers to EST implementation as insuperable. Based on these findings, we urge that rural service systems be included in dissemination efforts for ESTs.

Although the state of EST utilization in rural areas is relatively optimistic, it is far from optimal. There is indeed much room for improvement. ESTs are used in many of the rural CMHCs but represent a fairly low proportion of the treatments indicated by respondents. To the extent that the proportion of ESTs to total treatments used is an indicator of the probability of patients receiving ESTs, then ESTs remain underutilized.

Among the most alarming findings from this study is the relatively low utilization of ESTs for PTSD in both rural and nonrural settings. This might be particularly disconcerting for rural CMHCs in coming years as rural residents have historically been overrepresented in the military, and this trend continues today. Despite containing only 19% of the population, rural areas continue to produce over 44% of military recruits (Tyson 2005, November 4). Further, the disproportionately high death rates among servicemen from rural areas in the recent conflicts in Iraq and Afghanistan suggest that those who do return to rural areas will be more likely to have experienced traumatic events during their service (O'Hare and Bishop 2006). This may potentially lead to higher treatment demand for rural CMHCs to provide effective services for PTSD. Increased availability of ESTs in these clinics would help to meet this demand.

The current study is subject to several important limitations. The survey's poor response rate raises possibilities of response bias. Further, the validity of the study may be limited by the survey design. There is no way of knowing whether the respondents' self-reports are completely accurate descriptions of clinic practices. We also note that private for-profit clinics seem to be underrepresented in the study, although this type of service is a rarity in rural areas (Fox et al. 1995). As the study was meant to provide a broad-brush overview of current practices, generic labels for treatments (e.g., cognitive-behavioral therapy) were utilized rather than a finer delineation of treatment techniques (e.g., behavioral activation, cognitive restructuring).

The use of more focused methodologies is a logical direction for future research.

Though the findings indicate that rural CMHCs use ESTs with similar frequency to non rural CMHCs, the current study does not examine structural factors that may influence EST utilization. Variables such as staff size and composition, organizational structure, case mix, caseload, and funding sources may influence both utilization of ESTs and attitudes toward the adoption of manualized treatments. Future examinations of EST utilization in rural CMHCs should consider these factors in order to formulate effective models of dissemination.

Despite these limitations, the present study sheds some light on an important but neglected area of study: the utilization of ESTs in rural community mental health settings. The study represents a first effort to characterize EST use in rural clinics using a national sample. Though the study is by no means conclusive, the authors hope that the findings generate further discussion and investigation of the use of state-of-the-science treatments in largely underserved rural areas. Future research should focus on further delineating the needs of rural communities and on cost effective and appealing methods to deliver training and support for EST utilization.

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