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Social Workers as Research Psychotherapists in an Investigation of Cognitive–Behavioral Therapy among Rural Older Adults

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This is a report on the treatment fidelity of in-home cognitive–behavioral therapy (CBT) delivered by a sample of clinically trained, master’s-level social workers to a group of primarily rural, medically frail older adults as part of the Project to Enhance Aged Rural Living (PEARL) clinical trial. The social workers in this study received brief didactic and experiential CBT training. Audiotaped sessions were randomly selected and evaluated by independent reviewers. Results showed that the social workers adequately delivered CBT as measured by the Cognitive Therapy Scale. Older adult participants also evidenced pre-treatment improvements, suggesting that the social workers’ delivery of CBT facilitated improvement.

KEY WORDS: *cognitive–behavioral therapy; older adults; research psychotherapists; rural; treatment fidelity*

It is likely that in the future social workers will deliver a substantial portion of the mental health services that older adults receive, especially in rural settings. This is likely because social workers are already providing services in settings such as senior centers, long-term care facilities, hospitals, and home-health agencies. Given this trend, social workers may choose to deliver evidence-based psychotherapies, such as cognitive–behavioral therapy (CBT), that target underlying behaviors and dysfunctional thoughts.

CBT AND SOCIAL WORK

CBT is a well-established intervention for a variety of psychological disorders and health concerns. A search of common electronic databases using the terms “CBT” and “social work” revealed a number of articles on the topic but very few empirical studies. The delivery of CBT solely by social workers has been evaluated by a relatively small number of studies, which primarily examine client outcomes and neglect treatment fidelity (see Table 1). This is not an uncommon limitation. One review of social work intervention studies (Naleppa & Cagle, 2010) found that very few efficacy or effectiveness studies addressed several common fidelity criteria: (a) clarity of treatment definition, (b) identification of essential components for verification, (c) manualized treatment,

(d) therapist training, (e) supervision of therapists, (f) sources of verification (for example, measurement scale evaluating therapist performance), (g) sampling treatment sessions to ensure treatment consistency, and (h) use of fidelity data. An evaluation of treatment fidelity improves the understanding of critical treatment components as well as the challenges experienced by therapists in implementing an intervention, which can inform clinical practice.

We found only one empirical study of CBT delivery by social workers that also examined treatment fidelity using an observational rating scale of therapy sessions. Bradshaw and Roseborough (2004) examined the treatment fidelity of CBT to treat residual symptoms of schizophrenia. Audiotaped sessions were rated with the Cognitive Therapy Scale (CTS) (Young & Beck, 1980) on nine sessions per therapist. CTS ratings indicated that the therapy was judged overall to be adequately delivered (average item score = 3.69). No significant difference was found between the therapists.

Another study (Davidson et al., 2004) examined treatment fidelity using an observational measure to rate sessions of manual assisted cognitive therapy (MACT) for parasuicidal behavior delivered by a variety of professions. It included nurses ($n = 20$), clinical psychologists ($n = 6$), social workers ($n = 4$), psychiatrists ($n = 4$), and occupational

Table 1: Outcome Studies of Social Workers Delivering Cognitive–Behavioral Therapy (CBT)

Studies	N (Participant mean age, years)	Intervention	Therapists	Training	Supervision	Outcome
Bradshaw & Roseborough, 2004	N = 22 schizophrenia (30)	CBT for schizophrenia, for 60 minutes, 18 months, 1 hour weekly	Four MSWs; five years of experience	48 hours	Group and individual LCSW	80% of clients had statistically significant improvement in residual symptoms.
Bradshaw, 2000	N = 24 schizophrenia (32)	n = 13 Day treatment for 3 days, 18 hours per week, versus n = 11 Day treatment + manualized CBT, weekly	Two MSWs; 10 years of experience	—	Weekly supervision; intermittent observation of live and audiotaped sessions	Combined treatment significantly improved in symptoms and psychosocial function over three years.
de Anda, 1998	N = 51 middle school (median 13)	n = 36 CBT stress management group, 10 weeks, versus n = 18 Control	Second-year MSW	— Scripted	—	There was significant improvement in use of coping strategies and stress.
Kerfoot et al., 2004	N = 52 depression (13.7)	n = 26 Brief CBT for depression, 8 sessions, versus n = 20 Waitlist	43 SWs; seven allied health	24 hours + 11 courses	Poor attendance; every two weeks	No significant change was seen in depressive symptoms.
Mitchell, 1999	N = 56 anxiety (36.73)	n = 26 Medication versus n = 30 Medication + CBT group, 1.5 hours for 8 weeks	MSW	—	—	Improvements in anxiety were greater for combination treatment.
Subramanian, 1991	N = 39 chronic pain (61)	n = 19 Chronic pain group, six weeks, versus n = 20 Waitlist	Four LCSWs; two second-year MSWs	Six hours; observation of group	Weekly group	There was improved pain, physical functioning, and mood.
Whiteman, Fanshel, & Grundy, 1987	N = 55 parents at risk of abuse (33)	n = 13 Control, n = 8 Cognitive restructuring, n = 12 Relaxation, n = 11 Combination, six weeks in home for anger	4 MSW doctoral students	—	—	There was significant reduction in anger in all intervention groups compared to control.

Notes: Dashes indicate that information was not provided in the study. LCSW = licensed clinical social worker; MSW = master's in social work; SW = social worker.

therapists ($n = 3$). All therapists received three days of training on the intervention and ongoing supervision. Audiotapes of the available therapy sessions were reviewed and rated by two experienced CBT providers on the MACT Rating Scale. This scale is modeled after the CTS. The outcomes did not vary by discipline, therapist demographics, or treatment duration but varied only by therapist competence as measured by the rating scale. However, the mean scores by discipline were not provided.

Previous studies provide preliminary evidence that social workers delivering CBT can improve client outcomes (see Table 1). Further study in the area is desirable as studies of social workers delivering CBT assess client change and rarely assess treatment fidelity (de Anda, 1998; Mitchell, 1999; Scott & Stradling, 1991; Subramanian, 1991; Whiteman, Fanshel, & Grundy, 1987). In addition, many of these studies provide little information about the training protocol or the years of therapy experience of treatment providers, which would be helpful in developing and guiding clinical training on CBT. Social workers have been used interchangeably with other mental health professionals since the 1960s in several National Institutes of Health trials, but these studies often fail to report this and may note only that mental health therapists provided the intervention. In several clinical trials, a combination of social workers and other disciplines delivered the CBT intervention, which does not allow any conclusions to be drawn about the specific efficacy of the social workers providing therapy (Areal et al., 2005; Berkman, Jaffe, Carney, Czajkowski, & Kaufman, 2001; Norman & Lowry, 1995). Moreover, no studies could be located that examined the treatment fidelity of social worker CBT delivery specifically for older adults.

This study attempts to add to the literature by using data from a relatively large controlled trial of CBT (Scogin et al., 2007). The overall aim of the Project to Enhance Aged Rural Living (PEARL) was to improve the quality of life of a sample of rural older adults through in-home CBT that was delivered by social workers. In this article, we focus on treatment fidelity as demonstrated by an observational measure assessing CBT delivery. In addition, we report client outcomes.

METHOD

Data came from a randomized control trial that compared the effects of CBT to a minimal support

control condition. Minimal support consisted of weekly brief (5- to 10-minute) telephone calls during which research assistants provided encouragement and support. Following the three-month minimal support interval, control participants were provided CBT as per experimental participants. Assessments were conducted prior to randomization, immediately following CBT or minimal support, and at six months following the end of treatment. More details on the design of the study are provided in the report of the main study outcomes (Scogin et al., 2007).

Participant Factors and Recruitment

Inclusion criteria for participation were (a) age of 65 years or older, (b) T score of 55 or less on the Quality of Life Inventory (QOLI) (Frisch, Cornell, Villanueva, & Retzlaff, 1992), (c) T score of greater than 45 on the Global Severity Index (GSI) of the Symptoms Checklist-90-R (SCL-90-R) (Derogatis, Rickels, & Rock, 1976) using norms for non-patient adults, and (d) rural residence. Fifteen participants residing in an urbanized setting were randomized into the study because they otherwise met inclusion criteria and were recruited through existing referral mechanisms. Additionally, four participants with QOLI scores above 55 were randomized as were two participants who were 64 years of age. Exclusion criteria were (a) a self-reported history of schizophrenia, bipolar disorder, or current substance abuse; (b) current receipt of psychotherapy; or (c) significant cognitive impairment as indicated by a score of 23 or less (16 or less for those with less than a ninth-grade education) on the Mini-Mental Status Examination (MMSE) (Folstein, Folstein, & McHugh, 1975).

Participants were recruited at public and private home health care agencies, senior centers, church organizations, hospitals with associated home health care groups, and service providers such as physicians and pharmacists. In addition, advertisements and feature stories in local print media emphasized that the study was designed to evaluate the effects of a program to improve quality of life among rural older adults.

Data used in these analyses came from 88 older adults for whom 144 CBT sessions were reviewed and rated. The average participant age was 76.3 years, and most of participants were female (83%). The participants were African American (61.4%) and white (33.9%). The average number of years

of education was 9.2 years (range, 0 to 16 years). Participants rated their overall health as an average of 1.8 on a scale ranging from 1 = poor to 5 = excellent. All participants indicated that they needed some help with at least one or more basic or instrumental activities of daily living. Their mean MMSE score was 24.7 ($SD = 3.7$).

Measures

The CTS (Young & Beck, 1980) is an 11-item observational rating scale with two subscales designed to aid raters in evaluating audiotaped, videotaped, or live therapist delivery of cognitive therapy. The General Therapeutic Skills subscale provides guidance in rating if the therapist set an agenda for the session, demonstrated responsiveness to client feedback, showed empathy and an understanding of what the client was communicating, possessed effective interpersonal skills, collaborated with the client, and paced the session properly. Using the Specific Cognitive Therapy Skills subscale, raters assess the use of guided discovery to promote change, the focus on dysfunctional cognitions and behaviors in sessions, the quality of CBT change strategy, the skill with which CBT techniques were applied, and the quality of homework assigned. Each item is rated on a scale from 0 to 6, with 3 indicating satisfactory administration. Reliability for this instrument is .77 when two raters provide the ratings, as in this study (Vallis, Shaw, & Dobson, 1986). The scale has been shown to have good discriminant validity, with the total scores serving as markers of CBT competency.

The QOLI (Frisch et al., 1992) was used to measure self-reported overall quality of life. Sixteen domains are assessed: health, self-regard, philosophy of life, standard of living, work, recreation, learning, creativity, helping, love relationships, friendships, relationships with children, relationships with relatives, home, neighborhood, and community. Each domain is rated for importance on a three-point Likert-type scale, and satisfaction is rated on a six-point Likert-type scale. The cross-product is summed and this score is converted to T scores based on adult, community-dwelling norms. Cronbach's alpha in the normative study was .79 (Frisch et al., 1992) and was .65 in the present study at time 1.

The SCL-90-R (Derogatis et al., 1976) was used as a measure of overall psychological symptomatology. We used the GSI as an indicator of

overall distress. Cronbach's alpha for the 90 items at time 1 assessment was .96.

Treatment

Therapists and Therapist Training. The therapists were five licensed MSW clinical social workers (two African American and three white) who were trained to deliver CBT. Four of the therapists were female. Their mean age was 45.4 years (range, 32 to 58), and they had an average of 11.4 years (range, 5 to 22) of post MSW clinical experience. Four of the therapists had prior experience working with older adults. None of the therapists had delivered a CBT protocol prior to involvement with this project, and all had cursory prior exposure to CBT through coursework and continuing education.

Training of the therapists was conducted by the PEARL project staff and consultants over four sessions of didactic and experiential instruction. The trainees were given extensive background reading to complete, including *A Guide to Psychotherapy and Aging* (Zarit & Knight, 1996) and *Cognitive Therapy for Depression* (Beck, Rush, Shaw, & Emery, 1979). Twelve hours of didactic instruction were undertaken and were allocated as follows: overview of the research project (1 hour), principles of CBT (2 hours), CBT with older adults (3 hours), quality of life and CBT with older adults (1 hour), cultural sensitivity in delivering services to African American and rural participants (2 hours), training in helping participants reach treatment goals (2 hours), and issues of in-home psychotherapy (1 hour). Twelve hours of experiential training were conducted in which therapists practiced the core techniques of CBT in mock sessions. Feedback was provided until competency was achieved on the CTS. Weekly group supervision was conducted with the therapists following training.

Treatment Program. Treatment followed the manual developed by Thompson, Gallagher-Thompson, and Dick (1995) for the delivery of CBT to older adults. The standard course of treatment was 16 sessions, with the opportunity to extend treatment to 20 sessions if needed. Twice-weekly sessions were planned for the first month, with weekly sessions planned for the remainder of the treatment. The average number of sessions attended by CBT participants was 11.7. The average time to complete treatment was 5.3 months. Participants received treatment from only one

therapist. The number of cases seen and number of sessions completed by each therapist for the full clinical trial sample were as follows: therapist 1 saw 31 cases and completed 329 sessions; therapist 2 saw 34 cases and completed 369 sessions; therapist 3 saw 34 cases and completed 416 sessions; therapist 4 saw nine cases and completed 71 sessions; and therapist 5 saw 26 cases and completed 318 sessions.

Major components of the treatment included scheduling activities, identifying and changing unhelpful thoughts, relaxing, and being assertive. The treatment protocol developed by Thompson et al. (1995) included modifications of traditional CBT for use with older adults such as providing in-session cue cards as memory aids, slowing down the pace of the intervention process, and simplifying homework assignments. We also encouraged the inclusion of an intervention facilitator (family member or friend) where available to assist this frail sample.

Treatment Fidelity Monitoring. Treatment delivery was assessed through reviews of audiotaped CBT sessions. An attempt was made to review a session early in treatment (sessions 2 to 8) and later in treatment (sessions 9 to 15) per participant. Sessions were randomly selected and reviewed by an independent team using the CTS. Both CTS raters were advanced doctoral students in clinical psychology who had taken a doctoral-level course on the introduction to psychotherapy and at least one advanced course that included instruction in cognitive therapy (CT) or CBT. In addition, both students had from one to three practicums in which they were supervised in the use of psychotherapy techniques and CT procedures. These doctoral students received training with the *Cognitive Therapy Scale Rating Manual* (Young & Beck, 1980) from an experienced cognitive behavioral therapist. Once raters were assigned to tapes, there was a check on reliability on three to five tapes to ensure that reliability was maintained. If their interrater reliability was below .70, the mean of their scores was taken. Good interrater reliability on the CTS ratings was achieved. When CTS ratings became available, adherence was discussed during PEARL weekly supervision.

RESULTS

Treatment fidelity and therapist skill were evaluated in several ways. First, CTS data were examined to

ascertain the skill with which CBT was delivered. Means were calculated for CTS item scores across the 144 sessions, collapsing across the five therapists. All means were above 3, with scores ranging from 3.3 on “agenda” and “guided discovery” to 4.7 on “interpersonal effectiveness” (see Table 2). These scores indicate that studywide CBT was delivered competently across the 11 items constituting the CTS. Next, the two subscale scores across the 144 sessions were examined. The mean score for the General Therapeutic Skills subscale was 3.9 and the mean score for the Cognitive Therapy Specific Skills subscale was 3.8, indicating that CBT was adequately executed. The mean item score across the 144 sessions was 3.8.

It is possible that CTS scores would have changed over the course of the study due to therapist experience with CBT. The time course of the study was defined in an ordinal manner based on the date a participant entered into the study. Therapist CTS general skill performance was not significantly related to the time course of the study. However, there was a trend for increased competence on the Cognitive Therapy Specific Skills subscale over the course of the study, $r(88) = .21$, $p = .053$, using a correlational analysis. To evaluate whether therapists improved in performance over time per client on the CTS subscales, paired-samples t tests were conducted on sessions rated early in treatment and later in treatment. No significant difference between sessions earlier in treatment and later in treatment were observed on the CTS total, general, and CBT-specific scores (see Table 3 for descriptives by therapist and sessions early and later in treatment).

The CTS scores at the individual therapist level were also examined. An analysis of variance (ANOVA) was conducted to determine whether performance on the CTS total scores varied across therapists. Prior to conducting the ANOVA, the inclusion of a covariate was considered. It is possible that therapists who conducted more sessions would have better CTS performance. Therefore, a correlational analysis was conducted to assess the relation between the number of sessions completed and CTS performance, but no relation was observed and it was not included as a covariate in the model. The ANOVA revealed that CTS total scores were significantly different across therapists [$F(4, 88) = 3.6$, $p < .01$]. Based on least significant difference post hoc analyses and an examination of

Table 2: Descriptives of Cognitive Therapy Scale (CTS) Items, Subtests, and Total Scores across Therapists and Sessions

Item	Therapist					All Range	
	1 (n = 30)	2 (n = 36)	3 (n = 34)	4 (n = 12)	5 (n = 32)		All (N = 144)
Agenda	M (SD) 3.7 (1.6)	M (SD) 3.9 (1.4)	M (SD) 2.4 (1.1)	M (SD) 3.5 (1.2)	M (SD) 4.2 (1.1)	M (SD) 3.5 (1.4)	0.0-6.0
Feedback	M (SD) 3.7 (1.2)	M (SD) 4.0 (1.4)	M (SD) 2.7 (0.9)	M (SD) 4.1 (0.9)	M (SD) 3.8 (1.2)	M (SD) 3.6 (1.3)	0.0-6.0
Understanding	M (SD) 4.1 (1.2)	M (SD) 4.8 (1.2)	M (SD) 3.3 (1.3)	M (SD) 3.9 (1.1)	M (SD) 4.2 (1.3)	M (SD) 4.1 (1.3)	0.0-6.0
Interpersonal effectiveness	M (SD) 4.8 (1.2)	M (SD) 5.5 (0.9)	M (SD) 4.1 (1.2)	M (SD) 4.9 (1.0)	M (SD) 4.5 (1.2)	M (SD) 4.7 (1.2)	2.0-6.0
Collaboration	M (SD) 4.1 (1.2)	M (SD) 4.5 (1.1)	M (SD) 3.3 (1.4)	M (SD) 4.0 (0.9)	M (SD) 4.1 (1.3)	M (SD) 4.0 (1.3)	1.0-6.0
Pacing/use of time	M (SD) 3.6 (1.3)	M (SD) 3.9 (1.3)	M (SD) 3.0 (1.3)	M (SD) 3.9 (1.4)	M (SD) 3.8 (1.5)	M (SD) 3.6 (1.4)	1.0-6.0
Guided discovery	M (SD) 3.2 (1.1)	M (SD) 3.7 (1.2)	M (SD) 2.7 (1.2)	M (SD) 3.6 (0.5)	M (SD) 3.7 (1.0)	M (SD) 3.3 (1.2)	0.0-6.0
Focus on cognitions and behaviors	M (SD) 4.3 (1.3)	M (SD) 4.4 (1.2)	M (SD) 3.5 (1.3)	M (SD) 3.8 (1.3)	M (SD) 4.2 (1.1)	M (SD) 4.0 (1.3)	1.0-6.0
Strategy for change	M (SD) 4.6 (1.2)	M (SD) 4.3 (1.2)	M (SD) 3.5 (1.1)	M (SD) 4.3 (1.4)	M (SD) 4.1 (1.3)	M (SD) 4.1 (1.2)	2.0-6.0
CBT techniques	M (SD) 4.1 (1.3)	M (SD) 3.8 (1.1)	M (SD) 3.2 (1.1)	M (SD) 3.6 (1.3)	M (SD) 3.9 (1.1)	M (SD) 3.7 (1.2)	1.0-6.0
Homework	M (SD) 3.5 (1.6)	M (SD) 3.9 (1.2)	M (SD) 2.6 (1.3)	M (SD) 2.9 (2.0)	M (SD) 4.4 (1.1)	M (SD) 3.5 (1.5)	0.0-6.0
Cognitive Therapy Specific Skills subscale score	M (SD) 3.9 (1.0)	M (SD) 4.0 (1.0)	M (SD) 3.1 (1.0)	M (SD) 3.6 (1.0)	M (SD) 4.1 (.9)	M (SD) 3.8 (1.0)	1.0-6.0
General Therapeutic Skills subscale score	M (SD) 4 (1.0)	M (SD) 4.4 (1.0)	M (SD) 3.1 (1.0)	M (SD) 4.1 (1.0)	M (SD) 4.1 (1.0)	M (SD) 3.9 (1.1)	1.3-6.0
CTS total score	M (SD) 4 (.9)	M (SD) 4.3 (1.0)	M (SD) 3.1 (.9)	M (SD) 3.9 (.9)	M (SD) 4.1 (.9)	M (SD) 3.8 (1.0)	1.6-6.0

Note: CBT = cognitive-behavioral therapy.

the means, only therapist 3 scored significantly lower than three of the other therapists (see Table 2). This therapist nonetheless delivered CBT adequately as indicated by a mean score greater than 3. Although there is some variability in overall performance, all therapists performed above the acceptable threshold: Therapist 2 obtained the highest scores on general skills (4.4); therapist 5 obtained the highest scores on specific skills (4.1); and therapist 3 showed the lowest scores on the same (3.1). Based on a visual examination of CTS means and therapist years of experience, it does not appear that years of clinical experience were related to CTS outcome. Therapist 5 had 22 years of clinical experience; therapists 1 and 4 had the least clinical experience (five to six years) but performed almost as well. Therapist 3 had moderate experience (14 years) but scored lower than all of the therapists, whereas therapist 2 who also possessed moderate experience (10 years) performed the best on total CTS ratings. Therapist years of experience, number of sessions rated, and the two subscale score means and standard deviations by early and later sessions are provided in Table 3.

A more detailed approach to individual therapist delivery competence is to examine CTS item scores across all rated sessions. These data are presented in Table 2. Using a score of 3 as the benchmark, we found that only therapist 3 evidenced poor performance on particular aspects of CBT (specifically setting an agenda, feedback, guided discovery, and assigning homework).

The CTS data were also used to determine whether individual therapy sessions were rated as “in-modality” as evidenced by a mean score above 3 on the 11 rated items for a particular session. Across these 144 rated sessions, 25 (17%) of the sessions could technically be considered non-CBT sessions. Out-of-modality sessions by therapist were 10% for therapist 1; 6% for therapist 2; 41% for therapist 3; 17% for therapist 4; and 13% for therapist 5. Consistent with other analyses, individual differences in CBT competence were evident with therapist 3 performing more out-of-modality sessions.

Given the difference in CTS scores among therapists, we were interested in examining whether differences in client outcomes also existed. One approach in evaluating client outcome is to examine attrition rate by therapist. The attrition rate was 19.3% for this sample of 88 cases. The number of

Table 3: Therapists' Mean Scores on the Cognitive Therapy Scale, by Sessions Earlier Versus Later in Treatment Course

Therapist	Years of Experience	General Therapeutic Skills <i>M (SD)</i>		CBT-Specific Skills <i>M (SD)</i>	
		Early	Late	Early	Late
1	5	3.91 (.85)	3.88 (1.18)	3.86 (.82)	4.04 (1.28)
2	10	4.44 (.99)	4.46 (.72)	4.09 (.92)	3.66 (.88)
3	14	3.35 (.78)	3.29 (1.09)	3.28 (.95)	3.14 (1.12)
4	6	3.79 (.97)	3.11 (1.93)	3.40 (.92)	3.07 (2.02)
5	22	4.12 (1.03)	3.91 (1.24)	4.24 (.94)	3.93 (1.11)

Notes: CBT = cognitive-behavioral therapy. Sessions rated per therapist: therapist 1, early $n = 19$, late $n = 11$; therapist 2, early $n = 21$, late $n = 16$; therapist 3, early $n = 17$, late $n = 14$; therapist 4, early $n = 7$, late $n = 3$; therapist 5, early $n = 14$, late $n = 9$. If multiple early or late sessions were rated per client, then only the first of these sessions was counted toward the mean. One session was not counted because the session number was missing.

dropouts between therapists did not vary greatly in this sample: therapist 1, 4 out of 20; therapist 2, 5 out of 23; therapist 3, 3 out of 20; therapist 4, 3 out of 8; and therapist 5, 2 out of 17. An additional 31.8% of clients discontinued due to moves, illness, or death. Next, the scores on outcome measures of the 88 cases were examined before and after treatment in paired-samples t tests and significant improvements were evidenced on the QOLI [$t(87) = -6.0, p < .05$] and the SCL-90-R GSI [$t(87) = 4.3, p < .05$]. This uncontrolled evaluation of treatment response mirrors the results of the controlled trial (Scogin et al., 2007), in which we found that CBT was superior to a minimal support control condition in producing changes on the QOLI and SCL-90-R GSI. Next, we conducted mixed ANOVAs, entering the outcome measures (QOLI and GSI) by time as well as therapists to evaluate whether improvements over time were significantly different by therapist. No significant differences were evidenced in outcomes by therapists, suggesting that clients improved regardless of the therapist assigned to them.

Finally, we examined the relations of CTS scores to posttreatment scores on the QOLI and SCL-90 GSI, while controlling for pretreatment scores on these measures. These analyses used simultaneous multiple regressions analyses with posttreatment scores (QOLI and GSI) as the criterion and pretreatment scores (QOLI and GSI) and CTS subscale scores as the predictors. For the CTS total score, General Therapeutic Skills subscale score, and Cognitive Therapy Specific Skills subscale score, there were no significant relations with posttreatment QOLI or posttreatment SCL-90-R GSI.

Although CBT performance might be largely attributable to therapist-related factors, participant-related factors can also play a role in delivery

effectiveness. We explored this possibility by comparing the cases in which sessions were below threshold to those above on participant age, education, self-rated health, and MMSE score. There were no variables in which the out-of-modality cases were significantly different than those cases in which CBT was judged to be satisfactorily administered. Thus, basic participant factors did not appear to play a predominate role in poorer CBT delivery. We also considered the possibility that out-of-modality cases might have evidenced different pretreatment characteristics on our two major endpoint variables, the QOLI and the SCL-90-R GSI. These analyses also resulted in nonsignificant differences, corroborating the pattern evidenced with participant demographic factors.

DISCUSSION

CBT seems to be a natural fit for social work practice. This report of treatment fidelity in a clinical trial of CBT delivered by social workers provides a starting point for further exploration of treatment fidelity in social work CBT intervention research. In this study, CBT-naïve social work therapists were provided with brief CBT training, ongoing supervision, and a manualized protocol. The social work therapists demonstrated adequate delivery of CBT to vulnerable rural older adults. We base this conclusion on external ratings of skill and participant improvement on outcome measures. Using independent expert ratings on the CTS, we found that all of the social work therapists demonstrated acceptable overall performance in delivering the protocol-based intervention. With the exception of one therapist, there was very little difference in general therapeutic skills and CBT-specific skills between therapists. The therapist with the lowest scores still demonstrated an adequate mean

performance on the CTS total, General Therapeutic Skills subscale, and Cognitive Therapy Specific Skills subscale scores. However, a number of sessions for this therapist were rated as being out of the CBT modality. This therapist seemed to struggle with aspects related to structure, such as agenda setting and homework, and with clinical skills that would require more extensive training, such as responding to client feedback and using Socratic questioning for guided discovery. Compared with other items on the CTS, all of the therapists scored lower on guided discovery. Perhaps future CBT training and supervision should incorporate approaches to assist therapists with guided discovery. Prior studies of CBT and social work (for example, Bradshaw & Roseborough, 2004) have reported CTS mean scores similar to the one obtained by therapists in this study (3.7 vs. 3.8 current study).

Despite differences between therapists in CTS scores, no differences were evident in client outcome. In the controlled trial portion of this project (Scogin et al., 2007), we found that CBT led to significantly improved quality of life and significantly reduced psychological distress symptoms relative to a minimal support control condition. The current sample consisted of 88 participants, which was a subset of the 134 participants for whom CTS ratings were available. We found similar improvements in the present uncontrolled evaluation. Such improvement in client outcomes, even though some sessions were out of the CBT modality, requires further consideration. It is possible that with a vulnerable older adult population, therapists followed the protocol more loosely in certain sessions. When this was discussed during supervision sessions, social work therapists identified external circumstances such as financial difficulties or need for immediate resources as reasons for modifying the protocol to maintain rapport with clients. Given the in-depth training social workers obtain in case management, it would not be surprising if this was a factor in the percentage of out-of-modality sessions. It is also possible that this is common to many treatment studies, but as treatment fidelity is not examined as rigorously, this information is rarely disseminated. Alternatively, it is possible that common therapy factors (for example, empathy, structure) are responsible for client change.

Perhaps greater uniformity in CTS performance could have been accomplished with a different

training approach. A recent randomized control trial assessing the impact of a social work CBT training intervention on CTS scores (Armstrong et al., 2010) found that brief training can improve CTS performance. The social workers in the current study received brief training in CBT and in working with older adults. They participated in more than 24 hours of initial training, including 12 hours of didactic training and 12 hours of experiential training in which they were required to meet minimum CTS criteria. Training that includes an experiential component has been shown to be more effective in the transfer of skills than didactic methods for CBT (Friedberg, Gorman, & Beidel, 2009; Ng & Cheung, 2007). Second, the social work therapists obtained weekly supervision in a group format conducted by the lead investigators of the study. This facilitated their adherence to CBT principles and probably helped keep the quality of treatment fairly consistent. Further, independent evaluators listened to tapes of sessions to monitor therapists' adherence with CBT. These reviews were ongoing during the six years of the study. Feedback from the independent evaluator ratings on the CTS were relayed to therapists during weekly supervision meetings, which perhaps helped most therapists to adhere to the CBT protocol and maintain acceptable performance in CBT delivery. Therapists inexperienced in CBT delivery may benefit from similar treatment fidelity approaches. A study of social workers delivering CBT to adolescents in community agency settings (Kerfoot, Harrington, Harrington, Rogers, & Verduyn, 2004) used a similar training approach, but poor adherence to ongoing supervision possibly resulted in the poor outcomes reported. This suggests the potential value of frequent quality supervision. PEARL project social work therapists were also trained in delivering CBT using a CBT treatment manual. Use of a manual can improve therapists' ease in delivery and allow for better adherence to a therapeutic modality.

These findings provide initial information about the potential for master's-level social workers to deliver CBT to older adults when they have proper training, supervision, and supporting materials. Social work is one of the most prominent disciplines in the mental health delivery system, and intervention research that evaluates treatment fidelity can contribute greatly to the implementation of interventions. One of the limitations of this

study is that only five social workers were represented as providers, and thus we cannot generalize too widely. Despite this limitation, this study is one of the few studies that have assessed social work treatment fidelity in the delivery of CBT to older adults. Further research should continue this exploration to determine additional training approaches that can improve social work CBT treatment delivery. **SWR**

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