This study examined the impact of In-Home Cognitive-Behavioral Therapy (IH-CBT), an adaptation of standard cognitive-behavioral therapy, for 26 mothers with depression. All mothers were concurrently receiving home visitation services from either a Healthy Families America (HFA) or Nurse Family Partnership (NFP) agency. Pretreatment and posttreatment assessments were conducted using the Primary Care Evaluation of Mental Disorders (PRIME-MD), the Beck Depression Inventory-II (BDI-II), and the Maternal Attitudes Questionnaire (MAQ). A substantial reduction in depression was observed from pretreatment to posttreatment. Decreased levels of functional impairment were also found. The challenges of delivering cognitive-behavioral therapy in a nonclinical setting and integrating this treatment within a long-term prevention program are discussed. Future avenues for research, particularly the need for a controlled clinical trial, are also presented.

Key words: cognitive-behavioral therapy; depression; in-home; mothers

Introduction

Depression in the Context of Home Visitation

Home visitation has emerged as a promising prevention strategy when working with young children and their families (Guterman, 2001). Home visits, which can begin during the prenatal period and last until the child reaches two to five years of age, target diverse areas such as parenting skills, the mother-child relationship,
home safety, maternal health, and infant nutrition. There are currently thousands of publicly and privately funded home-visitation programs providing services to at least half a million children in the United States alone (Gomby et al., 1999). With home visitation, a home visitor (who, depending upon the program model, is a nurse, social worker, or paraprofessional) provides psychoeducational training and case management services to mothers and children. Designed primarily to prevent child abuse and neglect, home visitation seeks to promote optimal child development and prevent negative outcomes, including academic underachievement, psychological maladjustment, and antisocial behavior.

It is widely recognized that maternal depression interferes with the effective delivery of home visitation. In a National Institute of Health (NIH) workshop on current issues in home visitation (Margie & Phillips, 1999), the panel noted that “maternal depression . . . can significantly impede the capacity of a home visiting program to benefit families” (p. 10). Such observations are consistent with other research on parenting programs, in which depression has been found to be a moderate of intervention effectiveness (e.g., Forehand, Furey, & McMahon, 1984). The functional impairments resulting from depression undermine the potential benefits of participating in home visitation, and can result in significant long-term deleterious outcomes in children (Hay, Pawlby, Angold, Harold, & Sharp, 2003). Depression not only challenges home visitors who have limited training with depressed women, but it diverts their attention from the primary goal of delivering the prevention curricula.

The prevalence of depression in pregnant and postpartum women is about 13% (Evans, Heron, Francomb, Oke, & Golding, 2001; O’Hara & Swain, 1996). The prevalence of depression in the context of home visitation has been studied minimally. Stevens Ammerman, Putnam, and Van Ginkel (2002) found that 29.5% of first-time mothers scored in the clinically elevated range (> 14) on the Beck Depression Inventory-II (BDI-II) upon enrollment in home visitation. In a follow-up study, Ammerman, Putman, Stevens, and Holleb (2003) reported that 44.4% of first-time mothers in home visitation obtained clinically elevated scores on the BDI-II at either enrollment or after nine months of service.

Treatment of Depression

Recent research shows that 42.7% of depressed adults do not receive treatment (Kessler et al., 2003), and this figure is as high as 70 to 80% for pregnant and postpartum women. Of those who were treated, only 21.6% received adequate treatment (Kessler et al.). In home visitation, home visitors seek to link mothers with community resources, including mental health treatments. Yet, Ammerman et al. (2003) found that only 12% of depressed mothers who participate in in-home visitation received treatment in the first year of service. According to the National Center on Children in Poverty (Lennon, Blome, & English, 2001), poor, depressed women when compared with women who earn high incomes, are less likely to receive treatment from mental health professionals, less likely to receive psychological treatments, and less likely to receive newer (and possibly more effective)
medications. Even in cases of home visitation, where there is a home visitor to help link mothers with mental health services, there are formidable barriers to obtaining effective treatment. These include (1) maternal misattributions of depressive symptoms to the normal stressors of motherhood (Whitton & Appleby, 1996), (2) stigma associated with mental health problems, (3) lack of support from family members, (4) transportation limitations and child-care problems, (5) scarce treatment resources, and (6) nonadherence to treatment requirements.

Antidepressant medications are well-established effective treatments, but there are problems with their use in pregnant and postpartum women. Evidence has emerged for neurobehavioral disruptions in infants born to mothers using SSRIs during pregnancy (Zeskind & Stephens, 2004), although longer-lasting effects have not yet been identified. Also, antidepressant medications are excreted in breast milk in varying concentrations that are not well-related to types of antidepressant medication, dosage, or maternal blood levels. Finally, a recent study suggests that cognitive-behavior therapy (CBT) is more effective than antidepressant medication in depressed women who have been traumatized. Nemeroff et al. (2003) reported that, in the treatment of depression in 681 chronically depressed adults, a version of CBT was superior to Nefazodone in those who had been traumatized in childhood (51% remission vs. 34%); the combination of treatments did not significantly enhance response.

CBT is consistently effective in the treatment of depression, and is arguably one of the most extensively researched psychotherapies. CBT focuses on the identification and restructuring of maladaptive and irrational cognitions that precipitate and perpetuate depression. Gloaguen, Gottraux, Cucherat, and Blackburn (1998) summarize 48 clinical trials with diverse clinical populations. Effect sizes were clinically and statistically significant, demonstrating the effectiveness of CBT relative to waiting-list controls ($d^+ = .82$), medication ($d^+ = .38$), and other therapies ($d^+ = .24$, except behavior therapy). Moreover, in eight studies CBT was found to be more effective in preventing relapse, as demonstrated by an overall 29.5% relapse rate for CBT relative to 60% for antidepressants at one year. From the perspective of pregnant and postpartum women, CBT is an appealing treatment given the documented maladaptive thoughts in this population (Whitton & Appleby, 1996) and the fact that CBT typically seeks (among other things) to establish and strengthen social contacts (Beck, 1995), an essential ingredient to preventing relapse and limiting the negative impact of depression on children.

Development of In-Home Cognitive Behavior Therapy

There is an increasing effort to adapt existing treatments to the unique systems, contextual, and/or individual needs of target populations in order to optimize their impacts (National Institute of Mental Health, 1998). In-Home Cognitive Behavior Therapy (IH-CBT) was developed to adapt an existing, efficacious treatment (CBT) for depressed first-time mothers involved in in-home visitation. Specifically, IH-CBT uses the core features of CBT with adaptations to the treatment setting (home rather than clinic), identification (through screening by home
visitors during prevention services rather than self-referred or clinic referred), and integration with ongoing home visitation (mechanisms to ensure communication between therapist and home visitor and maximize coordinated service delivery).

The purpose of this study was to evaluate IH-CBT using a pre-post design. This was viewed as the first step in establishing the utility of an innovative, adapted treatment for depression in first-time mothers in home visitation. Specifically, 26 mothers were screened, deemed eligible using clinical severity criteria, and treated with IH-CBT. Treatment was administered during 15 sessions and guided by a manual. Pre-post assessments were conducted of psychiatric diagnoses, depression symptoms, and maternal attitudes toward motherhood. Additional data were collected on associated clinical characteristics, such as suicide history, prior hospitalizations, pharmacotherapy, and interpersonal trauma. Finally, client and home visitor feedback was obtained.

Method

Participants

Participants consisted of 26 first-time mothers with major depression participating in a community-based home visitation program. Table 1 shows demographic and clinical features of the sample. Mothers were young (mean age = 22.52 years), had little income (84.7% with incomes below $20,000), and were

| Table 1 Demographic and Clinical Characteristics of the Sample (N = 26). |
|-----------------|--------------|--------------|-------------|
| Variable         | N (%)        | Range        | M (SD)      |
| Mother’s age     | 18–33 yrs    | 22.52 (3.95) |
| Race/Ethnicity   |              |              |             |
| Caucasian        | 12 (46.2%)   |              |             |
| African-American | 12 (46.2%)   |              |             |
| Hispanic         | 1 (3.8%)     |              |             |
| Asian-American   | 1 (3.8%)     |              |             |
| Marital status   |              |              |             |
| Married          | 1 (3.8%)     |              |             |
| Unmarried        | 25 (96.2%)   |              |             |
| Income           |              |              |             |
| $3,000–9,000     | 10 (38.5%)   |              |             |
| $9,001–20,000    | 12 (46.2%)   |              |             |
| > $20,001        | 4 (15.3%)    |              |             |
| Psychiatric comorbidity | 16 (61.5%) |              |             |
| Any comorbid disorder | 16 (61.5%) |              |             |
| Other mood disorders | 7 (26.9%)   |              |             |
| Anxiety disorders | 14 (53.8%)  |              |             |
| Alcohol-use disorders | 0 (0%)        |              |             |
| Eating disorders | 5 (19.2%)    |              |             |
| Somatoform disorders | 1 (3.8%)  |              |             |
| Previously hospitalized | 9 (34.6%)   |              |             |
| Previously attempted suicide | 13 (50.0%) |              |             |
| Interpersonal trauma | 19 (73.1%) |              |             |
mostly unmarried (96.2%). The sample was characterized by a number of significant clinical features. The majority (73.1%) had experienced an interpersonal trauma (sexual abuse, physical abuse, witnessing interpersonal violence) at some point in their lives, and 15.4% were traumatized in the prior year. Recurrent depression was found in 46.2% of cases. Comorbidity was common, with 61.5% exhibiting an additional psychiatric diagnosis. The clinical severity of the sample was further evidenced by the proportion of mothers with prior suicide attempts (50.0%) and hospitalizations (34.6%). Furthermore, 38.5% had a history of psychotropic medications that were (according to self-report) minimally effective.

Procedures

Mothers were recruited from Every Child Succeeds (ECS), a regional home-visitation program serving demographically at-risk, first-time mothers and their children. Mothers are referred to ECS through a number of routes (e.g., birth hospitals, prenatal clinics), and are eligible anywhere from pregnancy to the time the child reaches three months of age. Two home-visitation models are used: Healthy Families America (HFA) (Daro & Harding, 1999) and Nurse Family Partnership (NFP) (Olds et al., 1999). HFA as implemented by ECS uses social workers with a BSW or undergraduate degree in a related discipline. The NFP utilizes nurses to provide services. All of the nurses are trained and certified by the Nurse-Family Partnership at the National Center for Children, Families, and Communities in Denver.

Mothers were screened at regular intervals over the first two years of home visitation using the BDI-II. Mothers who obtained a score of 20 or higher were offered an opportunity to participate in the program and subsequently received an eligibility assessment conducted by an assessor at the mother’s home. After presentation and signing of the consent form, mothers received a diagnostic interview. Mothers receiving a primary diagnosis of major depression were subsequently enrolled. Exclusionary criteria included having a primary diagnosis other than major depression, or having just started an antidepressant medication. Six (23.1%) of the mothers were on stable doses (at least two months) of antidepressants with minimal to no reported benefit. All mothers received both IH-CBT and home visitation concurrently.

Treatment Description

In-Home Cognitive Behavior Therapy (IH-CBT) is grounded in the core principles and established procedures of CBT for depression originally articulated by Beck and colleagues (Beck, Rush, Shaw, & Emery, 1979) and more recently refined, updated, and manualized (Beck, 1995). CBT focuses on altering irrational cognitions such as all-or-nothing thinking, magnification and minimization, overgeneralization, and emotional reasoning. This is accomplished through monitoring and recording of automatic thoughts, systematically challenging irrational belief systems, and generating and using alternative, more rational cognitions. Behavioral activation, which is working with clients to increase activity level and involvement in productive activities, is also an ingredient of CBT. Recently, dis-
mantling analyses have highlighted the importance of behavioral activation as a critical element in the effectiveness of CBT (Jacobson et al., 2001).

IH-CBT was delivered in the home by a licensed MSW-level social worker. Treatment consisted of seventeen sessions, were provided weekly, and lasted one hour. A booster session was administered one month after the end of treatment. Each session used a standardized format including such procedures as homework review and assignment, review of self-monitoring data collection (i.e., thought monitoring and behavioral-activity documentation), and cognitive restructuring. Clinical tools were developed and used to optimize impact for young, low-income mothers. The Ladder of Success, a visual diagram of a ladder, illustrates the mother’s progress over treatment and underscores the relationship between use of cognitive restructuring techniques and symptom improvement and helps mothers understand how and why they are improving. Finally, the therapy summary and planning for the future was provided at the last session. It describes the treatment, lists goals that have been met and what the mother has learned, and delineates steps to take if symptoms recur.

IH-CBT and home visitation were designed to work together synergistically, each helping the other achieve maximum effectiveness. To bring about integration, procedures were built into IH-CBT to ensure close collaboration between therapist and home visitor, and shared objectives among both providers and the mother. The home visitor attended the first and last sessions with the therapist and mother. We have found that mothers often have a close relationship with their home visitor and are wary of new professionals working with them in the home. By conducting the first session together, the therapist had an improved opportunity to rapidly form a therapeutic alliance with the mother, and demonstrate to the mother that the therapist and home visitor have a close working alliance as well. The joint fifteenth session involved presentation of the therapy summary, during which the home visitor is taught how to help the mother maintain gains and prevent recurrence of depression. Integration also occurred through written communication between therapist and home visitor utilizing a Web-based clinical-documentation system, and as-needed telephone contact. Mothers were informed in advance about therapist and home visitor sharing information, and the therapist was selective in the types of clinical information being shared so as to optimize benefits to mothers while maintaining appropriate confidentiality.

Measures

**PRIME-MD** (Spitzer et al., 1994). The PRIME-MD is a semistructured psychiatric interview using DSM-IV criteria designed for use in clinical settings. It is divided into five modules reflecting common psychiatric disorders encountered in clinical practice: mood, anxiety, alcohol, eating, and somatoform. Psychometric studies have documented the reliability of the measure and demonstrated validity through concordance with other diagnostic procedures (Spitzer et al.). The PRIME-MD includes the Brief Patient Health Questionnaire (BPHQ): (Kroenke, Spitzer, & Williams, 2001) which is comprised of eight items reflecting depression and anxiety symptoms, their severity and functional impairment, and recent
stressors and coping. The PRIME-MD was administered during the eligibility assessment and at the end of treatment.

**Beck Depression Inventory-II (BDI-II)** (Beck, Steer, & Brown, 1996). The BDI-II is the most widely used screen for depression in the world. It has been extensively used in clinical trials of treatments of depression (Gloaguen et al., 1998), and has been used with postpartum women. Its psychometric properties are well-documented and acceptable (Beck et al., 1996). This measure was used in initial screening and as a treatment outcome measure. Although some authors (e.g., Beck & Gable, 2001) have expressed concern that the BDI-II may be oversensitive to depression in pregnant and postpartum women secondary to endorsement of somatic symptoms (e.g., fatigue), it is noteworthy that such items do not appear to account for significantly elevated scores in this population. For example, Salamero, Marcos, Gutierrez, and Rebull (1994) found that somatic symptoms were associated with lower BDI scores, while endorsement of cognitive-affective items (and those items specific to depression, such as hopelessness and suicidal thoughts) was associated with elevated scores. However, in this study we analyzed changes in BDI-II scores both with and without the somatic items, following Spinelli and Endicott (2003). The BDI-II was administered during the eligibility assessment and at the end of treatment.

**Maternal Attitudes Questionnaire (MAQ)** (Warner, Appleby, Whitton, & Faragher, 1997) and mother’s post-treatment ratings. The MAQ is a 14-item measure of expectations of and attitudes toward motherhood, developed originally for use with depressed mothers. Each item is endorsed using a four-point Likert scale reflecting agreement with each item. High scores reflect increased dissatisfaction and negative attitudes toward motherhood. Warner et al. (1997) reported an association between the MAQ and a measure of depression, and an internal reliability coefficient of .84. The original scoring calls for a reduction of the four-point scale to three points, although we used all four points in the current study to take advantage of the full range of reporting. The MAQ was administered during the eligibility assessment and at the end of treatment. In addition, mothers provided posttreatment ratings (using a five-point scale (1 = strongly disagree, 5= strongly agree)) of the degree to which, as a result of treatment, they were more (1) confident about providing care to their child, (2) close emotionally to their child, and (3) effective in parenting.

**Mother and Home Visitor Feedback** Posttreatment feedback was solicited from mothers and home visitors to ascertain satisfaction with the adaptations that were designed to facilitate integration between treatment and home visitation. Specifically, mothers and home visitors rated agreement using a five-point scale (1 = strongly disagree, 5= strongly agree) that (1) the therapist and home visitor collaborated effectively, and (2) confidentiality was appropriate. Home visitors rated separately the following: (1) the therapist was available for consultation, and (2) concerns about the client were adequately addressed by the therapist.

**Home Visit Frequency** In order to ascertain the impact of IH-CBT on the delivery of home visitation (increasing or decreasing home visitation, or having no effect), frequency of home visits prior to and during IH-CBT was documented.
Results

Treatment Implementation

Mothers enrolled in IH-CBT after receiving between 31 to 762 days of home visitation (M = 353.2 days, SD = 251.1). In two cases, mothers were first seen during pregnancy. For the twenty-four mothers seen after the baby’s birth, the child’s age ranged from 17 to 915 days (M = 333.7 days, SD = 271.7). Twenty-two of 26 mothers received the full number of treatment sessions. Of the four that received fewer visits, one had 11 visits and three had eight visits. Reasons for leaving included moving out of the area (3) and discontinuing due to rapid improvement (1).

Depression Outcomes

Using diagnoses obtained with the PRIME-MD, results indicated that 84.6% of mothers either fully (69.2%) or partially (15.4%) remitted from major depression. Pre- and post-treatment summary severity scores from the BPHQ (reflecting presence and persistence of depressive symptoms from the PRIME-MD) were contrasted using a one-way ANOVA with repeated measures. Results indicated a statistically significant reduction in symptom severity and persistence following treatment (F(1, 25) = 36.31, p < .001; pre-treatment mean = 14.88 (SD = 5.28), posttreatment mean = 6.12 (SD = 5.35)). A pre-post comparison of BDI-II scores was conducted using a one-way ANOVA with repeated measures (see Figure 1). A significant reduction in depression symptoms was found (F(1, 25) = 42.66, p < .001; pre-treatment mean = 30.35 (SD = 8.21), post-treatment mean = 13.73 (SD = 9.38)). In order to control for the possibility that changes were primarily due to reductions in somatic symptoms related to the postpartum period,

**Figure 1** Means of pre- and postscores on the BDI-II and MAQ (N = 26)
this comparison was conducted omitting the somatic items of the BDI-II and found to still be statistically significant ($F(1, 25) = 34.73, p < .001$). Taken together, these findings indicate a sizable reduction in depressive symptoms and major depression in mothers treated with IH-CBT. A series of follow-up analyses were conducted in which pre-post BDI-II scores were contrasted using two-way ANOVAs with repeated measures in which the following factors were examined: trauma history (separated into physical abuse, sexual abuse, and witnessing violence), recent trauma history, any comorbidity, history of suicide attempts, history of hospitalizations, and concurrent use of medication. None of these comparisons were statistically significant ($p > .05$).

Functional Impairment and Stressors

Functional impairment was examined using an item on the BPHQ in which mothers indicated (using a four-point scale) the degree to which depression made it difficult for them at home, work, or getting along with others. Pre-post comparison using a one-way ANOVA with repeated measures was statistically significant ($F(1, 25) = 10.55, p < .01$; pretreatment mean $= 1.38$ ($SD = 0.80$), posttreatment mean $= 0.69$ ($SD = 0.62$)), indicating decreased impairment following treatment. Additional improvements from pre- to post-treatment were noted in the proportion of mothers indicating that they were “not bothered” (using a three-point scale) by the stress of taking care of children ($F(1, 25) = 8.39, p < .01$; pretreatment mean $= 1.19$ ($SD = 0.80$), posttreatment mean $= 0.65$ ($SD = 0.69$)), stress at work or at school ($F(1, 25) = 6.19, p < .05$; pretreatment mean $= 0.96$ ($SD = 0.87$), post-treatment mean $= 0.56$ ($SD = 0.64$)), financial problems or worries ($F(1, 25) = 7.50, p < .05$; pretreatment mean $= 1.54$ ($SD = 0.76$), posttreatment mean $= 1.08$ ($SD = 0.80$)), and having no one to turn to when having problems ($F(1, 25) = 7.22, p < .05$; pretreatment mean $= 1.19$ ($SD = 0.75$), posttreatment mean $= 0.69$ ($SD = 0.74$)).

Maternal Views of Motherhood

A pre-post comparison of MAQ scores was conducted using a one-way ANOVA with repeated measures (see Figure 1). A significant improvement in positive attitudes toward motherhood was found ($F(1, 25) = 15.32, p < .01$; pre-treatment mean $= 19.00$ ($SD = 5.70$), post-treatment mean $= 14.54$ ($SD = 4.70$)). As with the BDI-II, a series of follow-up analyses were conducted in which pre-post MAQ scores were contrasted using two-way ANOVAs with repeated measures in which the following factors were examined: trauma history, recent trauma history, any comorbidity, history of suicide attempts, history of hospitalizations, and concurrent use of medication. History of sexual abuse was statistically significant ($F(1, 24) = 4.55, p < .05$). Specifically, sexually abused mothers had a greater improvement in MAQ scores (21.13 vs. 13.25) than their nonsexually abused counterparts (18.06 vs. 15.11). Other comparisons were nonsignificant ($p > .05$). The relationship between the MAQ and the BDI-II was also examined at pre- and post-treatment. The two measures were unrelated at pretreatment ($r = .27$, ns), but a
moderate correlation was found at posttreatment \((r = .52, p < .01)\) indicating an association between depression and negative attitudes toward motherhood.

Finally, using five-point scale ratings at posttreatment, mothers reported improvement as a result of IH-CBT in their (1) confidence in parenting \((M = 4.18, SD = 1.10)\), (2) emotional closeness with their child \((M = 4.14, SD = 0.99)\), and effectiveness in parenting \((M = 4.41, SD = 0.73)\).

### Mother and Home Visitor Feedback

Using five-point scale ratings at posttreatment, mothers and home visitors reported that there was (1) excellent therapist-home visitor collaboration in treatment \((mother mean = 4.50, SD = 0.86; home visitor mean = 4.53, SD = 0.51)\), and (2) appropriate maintenance of confidentiality \((mother mean = 4.59, SD = 0.59; home visitor mean = 4.74, SD = 0.45)\). Moreover, home visitors reported that (1) the therapist was available for consultation \((M = 4.53, SD = 0.51)\), and (2) the therapist was responsive to home-visitor concerns about clients \((M = 4.68, SD = 0.48)\).

### Home Visits Frequency

In order to examine the possible impact of IH-CBT on the delivery of home visits, we examined the frequency of home visits received prior to and during treatment. A comparison of the number of home visits divided by days during both intervals revealed a modest but statistically significant increase in home visits received during IH-CBT \((F(1, 25) = 7.11, p < .05)\). Specifically, mothers received an average of one home visit every 15.60 days \((SD = 5.61)\) prior to treatment, which increased to one home visit every 13.09 days \((SD = 3.74)\) during concurrent implementation of IH-CBT.

### Discussion

This study documents the impact of IH-CBT on depression and associated features in first-time mothers in home visitation. It represents an adapted treatment in which an evidence-based intervention is modified to fit the unique needs of a population and setting. Mothers receiving IH-CBT experienced a substantial reduction in depressive symptoms and remission from major depression. Improvements were also noted in other areas of functioning, such as coping with stress and interpersonal support. Findings were particularly noteworthy given the clinical severity of the sample. Pre-treatment BDI-II scores were high, and many of the mothers had significant psychiatric histories including prior suicide attempts and hospitalizations.

Treated mothers also showed improvement in attitudes toward motherhood. Reductions on the MAQ were found from pre- to posttreatment, and mothers reported increased closeness to their children and more confidence and effective-
ness in parenting following treatment. Given the deleterious effects of maternal depression on children, improvements in maternal attitudes suggest that IH-CBT has the potential to benefit children as well. There are two possible mechanisms by which IH-CBT affects maternal attitudes toward motherhood. First, IH-CBT focuses on altering faulty cognitions, many of which involve negative self-appraisals about parenting and mother’s relationship with the child. And second, improving parent-child relationships and promoting attachment is a primary focus of home visitation, a task made easier as the mother experiences improvement in depression.

A salient feature of our sample was the prevalence of interpersonal trauma. Trauma is relatively common in at-risk mothers participating in home visitation (Stevens et al., 2002), and is strongly associated with depression (Putnam, 2003). CBT methods are effective with traumatized adults, and recent evidence suggests that depressed, traumatized women are more responsive to CBT than antidepressant medication (Nemeroff et al., 2003). Our findings confirm that traumatized women are responsive to a CBT treatment for depression. Indeed, women who were sexually abused in childhood showed greater improvements in attitudes toward motherhood than those without such histories. Anecdotally, we observed posttraumatic stress disorder symptoms (e.g., hypervigilance, dissociation) throughout the course of treatment in some of the mothers. Future research needs to more comprehensively address the interrelationships between trauma, its effects, and its implications for depression treatment.

Our findings have several implications for home visitation. First, it is clear that some mothers in home visitation evidence clinically significant levels of depression that require intervention. Home visitation provides an excellent opportunity to deliver treatment to a population that otherwise has great difficulty obtaining effective treatments. Second, many of these mothers have extensive psychiatric histories. Home visitation is a prevention program, but a substantial proportion of mothers display significant levels of psychopathology which require treatment before the prevention elements of the home visitation services can be effective. Third, a majority of mothers in our sample had significant interpersonal trauma histories which have been shown to impact on home visitation effectiveness. Further improvements in existing home visitation program models need to take into account these pre-existing and concurrent problems when developing interventions and curriculum.

This study demonstrates that existing evidence-based treatments such as CBT can be adapted to home visitation settings to address some pre-existing and concurrent psychopathology. This adaptation required addressing a number of issues not encountered in traditional CBT treatment settings such as an office or clinic. These included ensuring privacy, minimizing disruptions or intrusions from family and friends, setting limits and boundaries around phone calls, television and music systems, and incorporating child-care needs when they arose during a
therapy session. The therapy was integrated with existing home-visit services including joint sessions with the home visitor at the beginning and end of the therapy. Mothers rated the therapist/home visitor collaboration as excellent and indicated that confidentiality was maintained. Home visitors likewise highly rated the therapist as available to them, maintaining confidentiality, and responsive to their concerns about the client. The rate of home visits increased significantly during the treatment period, indicating that IH-CBT did not interfere with home visitation services and actually increased utilization of services.

This study has several strengths. It investigated an empirically-based treatment in a real-world setting. IH-CBT is a manualized intervention with clearly articulated procedures for adapting treatment to the population of first-time mothers in home visitation. Depression was examined both from a diagnostic and dimensional perspective, and data were gathered from both self-reports and interviewer reports. Outcomes included both depression and maternal views of motherhood. In addition, the impact of IH-CBT on the delivery of home visitation was explored. Finally, client and home-visitor feedback was obtained to determine satisfaction with those aspects of IH-CBT that were adaptations for home visitation.

There are also methodological limitations that restrict interpretation of findings. Most important is the pre-post design, and the need for a randomized clinical trial with a control condition to attribute changes directly to treatment. As a result, our findings must be viewed as preliminary rather than definitive. Also, the sample size was relatively small. Although characteristics of mothers in Every Child Succeeds parallel those of other home-visitation programs, application of findings to other home visitation populations or models must be made cautiously.

There are numerous avenues for future research with IH-CBT. First, the promising results of this study warrant replication and expansion in a controlled clinical trial. Second, short- and long-term follow ups are needed to examine durability of effects and relapse prevention. And third, investigating the impact of IH-CBT on child outcomes is an essential next research step.

References


