

Improving Maternal Mental Health as a Pathway to Economic Mobility in the TANF System

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Objective: The authors sought to evaluate the acceptability, feasibility, and initial outcomes of the delivery of a group cognitive-behavioral therapy (CBT) mental health intervention for mothers in the Temporary Assistance for Needy Families (TANF) program.

Methods: An 8-week group CBT program was made available to parenting women (N=40) in a large, urban TANF system from April to August 2019. Participants completed baseline and endpoint measures to assess depressive symptoms, perceived stress, social support, employment, and program acceptability. TANF administrative data were examined to assess TANF engagement.

Results: TANF staff were successfully trained to deliver CBT. The participants reported significantly reduced depressive

symptoms and perceived stress; perceived social support significantly increased from the beginning to the end of the intervention.

Conclusions: A model that fully embedded CBT delivery in a TANF system was acceptable to low-income parenting women and TANF staff and reduced depressive symptoms among the women. The scalability of interventions to address maternal depression among low-income women has presented a challenge. Delivering mental health interventions in the U.S. TANF system may offer a scalable method to reduce depression and increase employment in a population bearing a high mental health burden.

Psychiatric Services 2021; 72:1139–1144; doi: 10.1176/appi.ps.202000492

Depression is a common condition that can adversely affect one's capacity to work (1). Low-income pregnant and parenting women have particularly high rates of depression while often lacking access to treatment or care (2). Temporary Assistance for Needy Families (TANF), also known as cash assistance or "welfare," is funded by the federal government through a block grant to states. Congress created the TANF block grant through the Personal Responsibility and Work Opportunity Reconciliation Act of 1996. High rates of major depressive disorders have been documented among women receiving TANF, ranging from 12% to 39% (3). As depression can be treated, it is a modifiable risk factor for poor economic outcomes for women and their children and families.

Several studies have tested the impact of TANF on economic and mental health outcomes for women. In a meta-analysis examining these studies, positive effects of small magnitude were found on some economic outcomes, such as income and some measures of employment (4). These effects varied by the time point at which they were assessed. Additionally, some studies have shown small negative effects; for example, women enrolled in welfare-to-work interventions had a slight worsening of mental health at the

18- to 24-month follow-ups (4). Furthermore, the impact of welfare-to-work interventions on depression diagnosis appears to vary by race and ethnicity. The results of a study comparing welfare-to-work programs with traditional welfare programs indicated that the probability of depression diagnoses decreased for Black participants assigned to the welfare-to-work programs (5). However, no significant effects were observed for White participants, and the probability of a depression diagnosis increased for Hispanic participants (5). Morris examined the impact

HIGHLIGHTS

- Temporary Assistance for Needy Families (TANF) staff were trained in delivering cognitive-behavioral therapy (CBT) to parenting women.
- The CBT intervention reduced depressive symptoms and stress among the women.
- Delivering CBT in the TANF system may be a scalable model to address maternal depression among TANF recipients.

of other welfare program characteristics, including personal client attention (i.e., individualized attention given to parents as they transition to employment), on parental depression (6). The results of that study revealed that emphasis on personal client attention had no impact on depression risk. By comparison, emphasis on quick job entry was associated with an increased depression risk for parents with preschool-age children. Taken together, the results of these studies suggest that, in general, TANF programs on their own may not reliably and meaningfully improve maternal mental health and that, in some cases, TANF may be associated with worse outcomes for maternal depressive symptoms.

As such, researchers and policy makers have begun to explore the impacts of interventions embedded within TANF programs to address maternal mental health and economic outcomes (7–9). One study examined the effect of embedding a substance use disorder intensive case management program within TANF and found that the intervention group was more likely to be abstinent during their first 15 months and at the 24-month follow-up and were also more likely to be employed full-time (8, 10). A subsequent study examined the impact of a TANF-embedded nursing case management intervention, finding that both the intervention and control groups had decreased depression symptoms; however, the intervention group improved at a greater rate (9). Employment outcomes were mixed in that participants in the intervention group were marginally more likely to be working than their control group counterparts (11). Finally, Booshehri et al. (7) examined the impact of a TANF-embedded trauma-informed intervention and found that participants in the intervention group had improvements in depression symptoms, in their ability to manage stress and difficult situations, and in economic outcomes.

In light of the documented high levels of depressive symptoms among women receiving TANF benefits and a robust research literature documenting the impact of maternal depression on child health and developmental outcomes (12), researchers and clinicians have advocated for the integration of mental health services with the delivery of social services such as housing and employment services for lower-income families (13). This view reflects emerging policy and scientific perspectives that individuals with mental health conditions may be better served through interventions addressing multiple social determinants of health (14, 15).

In this study, we report on findings from a pilot study of embedding a depression treatment for mothers into a large, urban TANF system. The topic of this study has important ramifications for the integration of mental health and social service delivery, as it pertains to the acceptability of a scalable model to train TANF staff to embed mental health services within a large government social service system and measures initial outcomes across both health and economic dimensions.

METHODS

Study Design

The Mental health Outreach for MotherS (MOMS) Partnership is a program developed to improve the mental health of low-income mothers and female primary caregivers. The MOMS Partnership focused on the delivery of a manualized group, eight-session cognitive-behavioral therapy (CBT) intervention to women in community locations. The intervention was delivered once per week for 90 minutes and administered by a clinician and a community mental health ambassador (CMHA). The CMHA was a mother from the local community who assisted in recruitment and enrollment as well as codelivery of the intervention with the clinician. The CBT model adapted by the MOMS Partnership has proven effectiveness in reducing depressive symptoms for racially and ethnically diverse low-income pregnant and parenting women (16, 17).

In 2018, MOMS partnered with the Washington, D.C., TANF agency, the Department of Human Services. The MOMS program was embedded within the broader TANF system housed at the agency and called DC MOMS. Agency staff were trained in delivering the intervention. As of 2019, the Washington, D.C., TANF program served 11,795 families, providing a ready infrastructure to connect with a sizable number of women experiencing high levels of depressive symptoms.

The MOMS Partnership required that government agencies conducting the CBT program employ one paid licensed social worker or clinical psychologist at 100% full-time employment (FTE) and one CMHA at 100% FTE for every 130 individuals served by the program. The clinician and CMHA positions were filled by individuals already employed by the human services agency, who were then trained to deliver the CBT intervention to TANF recipients. Additional staff required to run the program were employed by the human services agency and included a clinical supervisor, manager, program coordinator, and data specialist, each at 20% FTE. Training occurred over a 2-day period, followed by weekly 2-hour supervisory calls for 8 weeks. Weekly technical assistance calls were conducted by MOMS staff at Yale University. Weekly data reports were sent from MOMS staff at Yale to the TANF team.

The CBT intervention was administered at two community-serving nonprofit organizations that were easily accessible for most TANF program participants and chosen on the basis of responses from a survey on TANF, distributed to mothers at the beginning of the program period. Eight groups of the CBT intervention were conducted between April and August 2019. Institutional review board approval for this study was waived by the Yale University Institutional Review Board.

Study Participants

Participants were recruited through engagement events held at community and TANF service provider locations, as well as through scheduled meetings with TANF case managers.

Potential participants consented to participation and were screened for eligibility by the TANF-employed clinician. Individuals were eligible to participate in the CBT intervention if they were women at least 18 years of age who were pregnant, had custody of a minor, or both; who were receiving TANF cash assistance; and who scored ≥ 16 on the Center for Epidemiological Studies–Depression Scale (CES-D), a depressive symptom screening measure (18). Women were excluded if they were unable to use a computer because of a severe mental or general medical impairment, had acute psychosis (19), or endorsed experiencing active suicidal ideation at the time of enrollment (20). To remain in the CBT intervention, eligible individuals were required to attend at least one of the first three CBT sessions.

Assessment Methods

Participants were administered a baseline questionnaire before the first CBT session and an endpoint questionnaire after the final CBT session (session 8). The baseline questionnaire collected information from the participant regarding demographic characteristics, depressive symptoms (CES-D), perceived stress (Cohen Perceived Stress Scale) (21), and social support as measured by the Medical Outcomes Study–Social Support Survey (MOS-SSS) (22). If the participant indicated a current need for additional social services at baseline, staff could assist with a connection to services. The endpoint questionnaire included additional questions about participant satisfaction with the CBT intervention and asked participants to rate how helpful the skills taught in the course were in their daily lives. The Qualtrics online survey platform was used to collect data.

Data-sharing agreements allowed sharing of TANF administrative data, including data on employment and earnings, of the government agency with the evaluation team. TANF engagement was measured by administrative data indicating the percentage of required hours of work activity that a participant completed each month. To evaluate whether the CBT intervention was delivered in accordance with the goals and procedures of the MOMS model, we used observational coding methods that assessed fidelity to treatment delivery (23, 24). A random sample of 20% of CBT session audio recordings was used to assess treatment delivery fidelity.

Analysis

A paired *t* test was used to assess change in continuous variables from the baseline to the end point, and McNemar's test was used for dichotomous categorical variables. Data were visualized with a histogram and a Shapiro-Wilks test to assess for normal distributions. Statistical significance was set at $p < 0.05$. All analyses were conducted in SAS, version 9.4.

RESULTS

During February 2019–June 2019, 122 women were screened for participation in the CBT intervention. Of the 87 women

who were eligible for participation, 46 attended at least one CBT session. Forty women who attended at least one CBT session and completed both the baseline and endpoint questionnaires were included in this analysis. Most women (93%) identified as Black or African American, non-Hispanic; 75% were single and never married; and 95% had at least a high school degree or General Education Development diploma (Table 1). The mean \pm SD CES-D score at baseline was 24.2 ± 9.5 .

Of women who attended at least one CBT session and completed both the baseline and endpoint questionnaires, the mean number of sessions attended was 6.4. At the time of the endpoint questionnaire, 97% of women endorsed using at least one of the skills taught in the CBT intervention “several times or more” in the past month. Participants endorsed a median of 9 (interquartile range = 8–10) of 11 skills taught as “very helpful” or “extremely helpful” and reported using these skills “several times or more” in the past month.

The mean CES-D score decreased about 30% from baseline to the end point (16.5, $p < 0.001$; Table 2). Women had higher mean perceived stress scores at baseline (8.7) than at the end point (6.4, $p < 0.001$), representing, on average, a 26% decrease in perceived stress. Mean scores on the MOS Overall Social Support measure increased from baseline (43.0) to the end point (61.4, $p < 0.001$); a similar increase in social support was seen on all subscales of social support ($p < 0.05$; Table 2). The proportion of participants who worked ≥ 15 hours per week for pay at baseline (15%) was not statistically different from the proportion of participants employed at the end point (23%).

TABLE 1. Descriptive characteristics of 40 women who attended DC MOMS cognitive-behavioral therapy sessions in April–August 2019 and completed a baseline and endpoint demographic and health questionnaire

Characteristic	N	%
In which of these groups would you place yourself?		
White, non-Hispanic	0	—
Black or African American, non-Hispanic	37	93
White, Hispanic	0	—
Black or African American, Hispanic	2	5
Asian	0	—
Other	1	3
What is your relationship status?		
Single and never married	30	75
Married	1	3
Partnered (have girlfriend or boyfriend)	4	10
Separated or divorced	4	10
Widowed	1	3
What is the highest level of education you have completed?		
Less than high school	0	—
Some high school or GED classes ^a	2	5
High school graduate or GED	17	43
Some college or vocational school	14	35
College graduate	7	18
More than college	0	—

^a GED, General Educational Development.

TABLE 2. Changes in demographic and clinical characteristics from baseline to end point in DC MOMS from April to August 2019

Characteristic	Baseline			End point			p ^a
	N	%	Mean±SD	N	%	Mean±SD	
Do you work ≥15 hours per week for pay?							.4
Yes	6	15		9	23		
No	34	85		31	78		
CES-D ^b score			24.2±9.5			16.5±10.3	<.001
Cohen Perceived Stress Scale (N=39) ^c			8.7±2.6			6.4±3.1	<.001
MOS Social Support subscales ^d							
MOS Emotional Support (N=39)			43.6±24.8			62.9±23.9	<.001
MOS Tangible Support			33.4±27.6			48.4±30.6	.001
MOS Affectionate Support			54.2±23.7			74.6±24.9	<.001
MOS Positive Social Interaction			43.1±30.4			60.6±26.4	<.001
MOS Overall Social Support (N=39)			43.0±23.1			61.4±21.8	<.001

^a Paired t test was used to compare continuous measures; McNemar's test was used for categorical variables.

^b CES-D, Center for Epidemiological Studies–Depression Scale; range=0–60, with higher scores indicating the presence of more depressive symptoms.

^c Range=0–16; higher scores indicate more stress.

^d Medical Outcomes Study (MOS) Social Support scores range from 0 to 100; higher scores indicate greater levels of social support.

Administrative data were analyzed for the first cohort of participants. Of 22 women who attended at least one CBT session, 20 who completed both the baseline and endpoint questionnaires were included in this analysis. Among those in the first cohort for whom TANF administrative data were available before and after engagement with the DC MOMS program (N=8), the average percentage of monthly activity requirement met from the 2 months before the DC MOMS program (103%±17%) to the 2 months after (120%±38%) did not statistically significantly change ($p=0.2$), although the percentages were moving in a direction suggesting increased engagement.

During the 2 months before engagement with the DC MOMS program, 7 of 20 (35%) participants were enrolled in an educational program or held an occupational training placement. Six of 20 (30%) remained enrolled during the 2 months after the DC MOMS program. One of the 22 participants in the first cohort enrolled in an educational program or gained a training placement or employment during the intervention; however, data for this participant were excluded from analysis because she did not complete the endpoint assessment. Most participants, 93% (N=40), were satisfied or very satisfied with the CBT intervention. The CBT intervention was delivered with high fidelity in regard to instructor adherence to key goals and with moderate fidelity in terms of key concepts addressed in each session.

DISCUSSION

Here, we show that a CBT intervention delivered by TANF staff has the potential to improve the mental health status of parenting women with low income who receive TANF. We examined a pilot intervention to reduce depressive symptoms in order to increase positive economic outcomes. We conducted this study with the understanding that adding research to a national discourse on mental health, poverty, and economic inequality is essential. Results from mental health interventions in social service systems aiding those

living in poverty can inform policies directed at alleviating poverty.

Research on families living in poverty has identified maternal depression as a key factor that broadly affects the well-being of children and the economic opportunities of families (25). Maternal warmth and positive maternal mental health status operate as a buffer, weakening the association between economic hardship and poor child and adolescent health outcomes (26–28). In particular, for children who are affected by economic hardship and who belong to racial-ethnic minority groups, such as most children of the women in our sample, interventions that improve the mental health of parents have been shown to weaken an association between economic hardship and indicators of well-being (29–33).

Our results have several important implications for addressing maternal depression within the TANF system. First, our results provide preliminary evidence that it is feasible and acceptable to mothers, TANF staff, and policy makers to fully embed mental health interventions for mothers within the TANF system. Compared with other studies of psychotherapy with women who have low income, a high percentage of mothers in our pilot study enrolled and were retained in the intervention (34). Second, our findings, although quasi-experimental and pilot in nature, suggest that embedding mental health services for mothers in the TANF system significantly reduced maternal depressive symptoms. Third, although we did not observe any statistically significant changes in employment or TANF engagement, our results suggest movement in a positive direction, with results that may become significant with longer follow-up and a larger number of participants. Fourth, our results suggest not only that it is acceptable and feasible to embed mental health services for mothers within TANF but that services can also be delivered by TANF staff while upholding fidelity to the model. In our model, extant TANF staff were reassigned and trained to deliver the CBT interventions. This reassignment of TANF staff provides a model that can be replicated

nationally, given that many TANF programs have clinicians and parent navigators who may be eager for additional training and support to better serve mothers with high levels of stress and depression. We recognize that training was not enough to achieve high-quality implementation; rather, ongoing support through weekly calls and continuous data sharing and discussion allowed clinicians, CMHAs, managers, and lead administrators of the TANF program to focus on implementation efforts. Barriers identified during this process were elevated to TANF managers and directors.

This study had several limitations. Because this was a feasibility study that involved proof of concept, we used a pre-post design without a control group to assess initially the acceptability and feasibility of embedding a mental health intervention within a large government system. This design is weaker than a randomized design, but it allowed us to investigate the acceptability and feasibility of embedding mental health interventions in a system that serves women in high need of mental health treatment. Future studies will evaluate the longer-term outcomes of the CBT intervention on mental health status, income, and employment. The primary measures used in this study were based on self-report items; participant self-reported data on satisfaction and mental health status are valuable in assessing women's firsthand experience of efforts to address their mental health within a system originally designed to lift children and families out of poverty. Future data will be analyzed such that mental health outcomes for women participating in the DC MOMS interventions can be compared with those of women not receiving the intervention but who are matched on key demographic and clinical variables to allow for representative conclusions. The purpose of this study was to add to a small but growing literature that has studied the acceptability, feasibility, and scalability of a novel model to address structural determinants of mental health within a national social service system.

Our results are critical to the field of health and social services integration in that this is one of only a handful of studies to embed mental health services within TANF. To our knowledge, our study is one of the first that has utilized extant TANF staff to serve mothers, a population with high mental health treatment needs. Training existing TANF staff versus hiring new staff to deliver evidence-based interventions such as CBT is one way to ensure scaling and replication of this model. Additionally, we allowed the TANF site to make several adaptations to the model to ensure engagement, adherence, and validity of the data collected. For example, in our training process, we were explicit about the core components of the model and fidelity to the intervention. We allowed for adaptations outside of these components to enable tailoring of the model to the local context. For example, we allowed for the final, celebratory CBT session to include "themes" relevant to local context and culture (e.g., certain foods, favorite color of clothing, and speakers), and some questions on the endpoint

questionnaire were slightly modified when CMHAs and clinicians raised the issues of literacy and meaning.

Parenting women face a dual burden of widespread poverty and heightened risk for depression. However, the traditional focus in studies of barriers to employment among women has often been on structural barriers, including access to child care and transportation or personal characteristics such as work experience. Maternal depression appears to be an important barrier to economic mobility, and the existence of depressive symptoms may prevent women from leaving welfare for work and remaining employed (35), an observation that prompted and was the main focus of the present study.

CONCLUSIONS

Interventions for and policy solutions to mental health problems are important but often overlooked features of systems to promote economic mobility. Our findings add to the literature reporting that one pathway to employment and higher incomes for low-income parenting women is improved mental health (36, 37). Accordingly, assessments and interventions for depression and other psychological distress that are made widely available through the TANF system may offer a scalable approach to help mothers increase earnings and employment and reduce the cycle of intergenerational poverty.

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This study was supported by the National Institute on Drug Abuse (award T32 DA-019426) and by an anonymous philanthropic donor and the Esther & Joseph Klingenstein Fund.

The authors report no financial relationships with commercial interests.

Received June 30, 2020; revision received November 19, 2020; accepted December 21, 2020; published online May 17, 2021.

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