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A Pilot Investigation to Enhance Behavioral Health Referral for Perinatal, Low-Income Women With Mood Disorders

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Abstract

Background—Perinatal, low-income, ethnic minority women with mood disorders underutilize behavioral health treatment. A community–academic partnership was used to address behavioral health initiation among this population.

Objectives—We sought to examine the feasibility, acceptability, and preliminary outcomes of a behavioral health referral intervention with low-income, ethnic minority perinatal women diagnosed with mood disorders.

Methods—An open trial pilot study was conducted with 38 perinatal women. The behavioral health referral intervention consisted of two sessions of manualized referral strategies to enhance access to care. The main outcome was attendance at a behavioral health appointment.

Results—Approximately 55% of the perinatal women attended a behavioral health appointment within 2 months (i.e., initiated treatment). Intervention participation rates and ratings were high. Depression scores decreased from baseline to after the intervention.

Conclusions—The findings demonstrated favorable outcomes compared with other referral interventions. The behavioral health referral intervention shows promise for implementation in community settings.

Keywords

Mood disorders; health disparities; mental health services; community-based participatory research; women

Mood disorders, namely, depressive and bipolar spectrum disorders, are prevalent among women. The perinatal (i.e., pregnancy and postpartum) period is a time during which there is an increased risk for the development and reoccurrence of mood disorders.^{1,2} The 12-month prevalence rates for pregnant and postpartum women are estimated at 13.3% and 15.2%, respectively, from the National Epidemiologic Survey on Alcohol and Related Conditions.³ Perinatal depression has been associated with increased rates of preterm birth, low birthweight, fetal growth restriction, infant developmental delays, and infant feeding and sleep problems.^{4,5}

Because of the deleterious effects of mood disorders on maternal functioning, as well as fetal and infant outcomes, it is critically important for perinatal women to receive behavioral health treatment. Although there is a need for treatment, it is clearly documented that perinatal women underutilize behavioral health treatment.^{3,6} There are numerous personal, practical, and organizational barriers to behavioral health treatment among perinatal women with mood disorders. These include lack of knowledge about treatment, family obligations, lack of transportation, shame, stigma, lack of insurance, limited availability of services, low priority of behavioral health, and perceived insufficient time.⁷⁻⁹

Underutilization of behavioral health treatment is further compounded for ethnic minority mothers. A study in Los Angeles with a largely ethnic minority sample showed that only 21% of mothers with major depressive disorder were treated within the last 12 months.¹⁰ The National Epidemiologic Survey of Alcohol and Related Conditions showed that African American and Hispanic mothers with past year depression were less likely to receive treatment than White mothers, although fewer than one half of all the mothers received treatment.¹¹ Additionally, in an epidemiological study of African American and Caribbean black mothers, fewer than one half of black mothers with a mood disorder within the last 12 months used any behavioral health services.¹²

Typically, once a perinatal woman is identified as having mood difficulties, the routine practice is to give a referral to a provider, a practice that has been ineffective in facilitating treatment initiation. Kim et al.¹³ found that only 31% of perinatal women initiated treatment after being given a behavioral health referral). Similarly, Smith et al.¹⁴ found that 38% of perinatal women with a psychiatric disorder attended at least one behavioral health visit within a 6-month period after being given a referral at baseline and follow-up visits. Another referral study within an obstetrics clinic included an on-site social worker whose first appointment was offered for no fee to women without insurance. Nonetheless, the findings indicated that only approximately 30% of women reported using depression treatment within 3 months after the referral.¹⁵ These studies document the low rates of behavioral health initiation for perinatal women, even with specific screening and referral activities.

Given the frequency of perinatal depression, its harmful generational consequences, and limited use of behavioral health by afflicted women, it is essential to engage community members in the problem solving process and to seek relevant, effective and culturally sensitive solutions. This process demands a multistakeholder approach, often called community-based participatory research, which has the capacity to effectively translate scientific research into the community and engage community members, especially vulnerable populations with a history of mistrust.¹⁶ We used a community-academic partnership to develop a behavioral health referral intervention for low-income, ethnic minority, perinatal women with mood disorders and conduct a preliminary test of its feasibility, acceptability, and outcomes.

METHOD

The Partner Agency

The partner community-based organization (CBO) is a private nonprofit organization founded to address infant mortality and morbidity in a large urban setting. The agency provides direct service, research, and advocacy in high-risk neighborhoods through the use of a home visiting model using community health workers (CHWs). Approximately 2,600 women receive services annually from the CHWs. The agency defines low-income as the receipt of public benefits. An existing perinatal depression program screens clients for depression and provides supportive and preventative services. Mental health treatment is not provided by the agency. As a result, if a woman is in need of mental health services, a referral plan is initiated with a masters-level clinician and a CHW to assist her in seeking care.

Partnership

Over the past 8 years, a community–academic partnership has existed to address community concerns around perinatal depression. The nine principles developed by Israel et al.^{17,18} to increase community engagement and decrease health disparities provides a conceptual framework to guide the partnership. The partnership consists of a researcher from a local hospital and university and the CBO with its lead being its Research Director. The partners' previous research¹⁹ served as an impetus for the CBO to develop and implement agency-wide screening for perinatal depression. For the current study, they partnered to conceptualize the study, secure funding, and implement and disseminate the study. Both partners worked collaboratively to address research, clinical, and administrative challenges throughout the study and viewed these as opportunities for growth. Additionally, a research assistant was hired by the CBO and the academic institution who maintained office space with both partners, which improved communication, facilitated problem solving, and strengthened decision making by taking into account the cultures of the two different institutions.

A community advisory board was established by the CBO to provide guidance and direction for the study. Consisting of key stakeholders in perinatal depression in the identified community, members included key agency staff, a former agency client, colleagues at the academic institution, and a staff member from the local behavioral health system. The community advisory board was instrumental in offering modifications to the study design, giving recommendations about resources for mental health referral, and suggesting future research directions. The community advisory board recommended linkages with local behavioral health services to facilitate expeditious referrals and encouraged the gathering of more information about the referral process at both individual and system levels.

Procedures

The design was an open trial pilot study to examine the behavioral health referral intervention to enhance health care utilization for mood disorders. Participants were recruited from the partner CBO, which provides home visiting services using a CHW model. Women were screened and those having a score of 12 or higher on the Edinburgh Postnatal

Depression Scale²⁰ were referred by the CBO's CHWs to participate in the study. A research assistant provided a verbal orientation to all referred women by telephone and assessed preliminary eligibility criteria. If the women met preliminary eligibility and were interested in participating, a diagnostic interview screening was scheduled. This screening included an abbreviated version of the Structured Clinical Interview for DSM-IV.²¹ Women who met full eligibility criteria for the study were administered baseline questionnaires by the interventionist. To address literacy issues, the questionnaires (except the health literacy measure) were read to the participants. The behavioral health referral intervention was delivered, followed by a postintervention assessment occurring 8 weeks after the baseline assessment and administered by a research staff member. Each participant was paid \$25 for the diagnostic and baseline assessments and \$50 for postintervention assessments. This study was approved by the hospital's institutional review board.

Participant Eligibility, Recruitment, and Retention

Women were eligible for the study if they 1) were pregnant or at least 2 weeks postpartum, 2) were at least 18 years of age, and 3) had a current diagnosis of a mood disorder. Exclusion criteria included being currently treated for mental health problem, infant death if postpartum, or significant psychotic symptoms. Sixty-seven women were referred to the study by their CHWs. Of those referred, 51 (76%) were administered the initial telephone screen; the remaining were ineligible (n = 6), no longer interested (n = 3), or could not be reached (n = 7). Of those who were administered telephone screens, 39 (76%) completed the diagnostic interview, 8 were lost, 3 were ineligible, and 1 was no longer interested. Thirty-eight women (97%) also completed the baseline assessment with one withdrawing. Eight-week postintervention assessments were completed by 36 participants (94.7% of those with baseline interviews); 2 were lost to follow-up.

Referral Intervention

Based on our qualitative research findings,⁷ the research literature and expertise of the CBO service providers and co-authors, we developed a behavioral health referral intervention. The intervention is a manualized set of enhanced referral strategies to facilitate access to care for mood disorders based on identification of common barriers and effective solutions, as well as the need for systematic follow-up to initial referral efforts. Several of the CBO staff read the manual and gave feedback about psychoeducation content, problem solving topics and referral strategies. The intervention is based on a case management model with the addition of specific psychoeducation modules (Table 1). The intervention consisted of two sessions which ranged from 18 to 45 minutes. The intervention was delivered in person mostly in the home, but a few occurred at the CBO sites where it was delivered in a format similar to that used in-home visitation by the CHWs. The intervention provided information about navigating the behavioral health system and helped to prepare the participant for the appointment (e.g., identifying childcare). The trained, bachelors-level interventionist identified potential behavioral health referral sites that were convenient in location, appropriate for the women's diagnostic presentation, consistent with participant's preferences, and accepted her insurance. There was frequent communication between the interventionist and the participant via telephone to assist in making and attending a mental health appointment. After an initial appointment was scheduled, the interventionist gave

reminder calls, facilitated transportation (e.g., gave bus tokens, directions), and was available to attend an appointment.

Measures

The main outcome was the Cornell Service Index,²² which measures the quantity, type, and characteristics of mental health services. For the study purposes, attendance at a behavioral health appointment is considered initiation of treatment. Secondary outcomes were the Beck Depression Inventory-II,²³ which measures depressive symptom severity and Multidimensional Scale of Perceived Social Support,²⁴ which measures perceived social support from family, friends, and significant others. To determine eligibility, the Mood Disorders and posttraumatic stress disorder modules and psychosis screen of the Structured Clinical Interview for DSM-IV²¹ were administered. The Short form of the Test of Functional Health Literacy in Adults²⁵ was conducted to measure the functional literacy level of patients.

RESULTS

Participant Characteristics

The participants included 38 perinatal women. The racial/ethnic composition was 84.2% African American ($n = 32$), 5.3% Latino ($n = 2$), 2.6% Asian ($n = 1$), and 7.8% multiracial/ethnic ($n = 3$). The diagnoses of the sample were: major depressive disorder, 84.2% ($n = 32$); bipolar disorder, 13.2% ($n = 5$); dysthymic disorder, 2.6% ($n = 1$), and depressive disorder not otherwise specified, 2.6% ($n = 1$). Posttraumatic stress disorder was frequently comorbid (44.7%; $n = 17$). The participants' mean depression score on the Beck Depression Inventory-II was in the severe clinical range. All the women demonstrated adequate health literacy. Table 2 shows participant characteristics.

Intervention Participation

The intervention consisted of two sessions. Thirty-six women (94.7%) received one session and 29 women (76.3%) received two sessions. The interventionist assisted 27 (71.1%) participants in making the initial call for the behavioral health appointment.

Service Utilization Data

Twenty-nine women (76.3%) scheduled an appointment for behavioral health treatment and 21 (55.3%) attended a behavioral health appointment by the postintervention follow-up, thereby initiating treatment. The number of appointments ranged from zero to three with a mean of one appointment (standard deviation [SD], 1.04). The majority of participants who attended a behavioral health appointment (81.0%; $n = 17$) were accompanied by research staff to that initial appointment.

Secondary Outcomes

Changes from baseline to postintervention follow-up were examined. Paired t tests demonstrated that depression scores decreased significantly from baseline to postintervention follow-up ($t = 2.76$; $p < .01$). Nonetheless, the postintervention depression

mean score on the Beck Depression Inventory-II was in the clinical range (mean, 27.1; *SD*, 13.4). Because social support did not meet normality assumption, a Wilcoxon signed rank test was conducted but showed no change in social support over time.

Intervention Ratings

Using a rating scale from 1 (strongly disagree) to 5 (strongly agree), participants were asked to rate the intervention at the post-intervention assessment. Mothers rated helpfulness, satisfaction and harm. The mothers rated the helpfulness (mean, 4.61; *SD*, 0.49) and satisfaction (mean, 4.61; *SD*, 0.60) of the interventions highly. Ratings of harm for the interventions were low (mean, 1.14; *SD*, 0.35).

Barriers to Mental Health Utilization

To gather additional exploratory information about behavioral health utilization, barriers to behavioral health utilization were coded based on the interventionist's notes, which were collected for each of the participants ($n = 38$). A list of barriers commonly described in the research literature were generated and organized based on the following categories: practical barriers, personal barriers in the women's life, and institutional barriers. Subcategories were developed accordingly. A research assistant read and coded all the notes to identify the barriers and these were checked by an independent research assistant. The five most frequent barriers encountered were childcare (34.2%; $n = 15$), maternal resistance to medication (28.9%; $n = 11$), family conflict (28.9%; $n = 11$), lack of social support (23.7%; $n = 9$), and difficulty contacting the mental health agency (21.1%; $n = 8$).

DISCUSSION

This article describes the development and initial testing of a behavioral health referral intervention aimed at perinatal women with mood disorders through a community-academic partnership. The intervention was embedded in a CBO home visiting program and used their case management model. Findings showed that 55% of the participants initiated behavioral health treatment. An initiation rate of 55% is higher than many of the interventions that have been designed to enhance behavioral health referral for perinatal, depressed women (30%–38%).^{13–15}

The intervention tested in the present trial included several strategies that have been recommended for facilitation of behavioral health referral. For example, it included psychoeducation about depression, encouragement for attendance, social and instrumental support, flexible referrals tailored to women's needs, and interventionists who were genuine, warm and trustful.²⁶ It was an active facilitation process instead of simply giving a perinatal woman a list of potential referral agencies. For example, the interventionist helped the participant to call the referral agency, attended the appointment, and made multiple contacts to encourage attendance and to problem solve barriers. The intervention was aimed at addressing several barriers to the initiation of behavioral health referral, such as lack of knowledge of perinatal depression and the behavioral health system, lack of support, logistical difficulties, and stigma. The intervention was delivered in a brief period with few in-person meetings. The women's participation was high and the intervention was perceived

favorably and safe. Because our sample was vulnerable, with limited economic resources and high levels of trauma, they may need this direct facilitation of initiating care. The intervention is an example of health navigation; however, the use of navigators in behavioral health is relatively new. Coordinating care between the behavioral, medical, and community systems is challenging and bifurcation of the system is a problem.²⁷ Using highly paid professionals may prove cost prohibitive for sustained adoption; thus, fiscally sound alternatives are needed.²⁷

Although the main outcome was the rate of behavioral health initiation, secondary analyses revealed additional important findings. The women's depression severity decreased over time. This finding was not fully expected because, by the 8-week postintervention assessment, most of the women had only attended one behavioral health appointment, which typically was an intake appointment. It is possible that the process of initiating treatment helped to alleviate some of the depression symptoms. Talking about one's problems in the diagnostic interview and with the interventionist may have been helpful. Another potential explanation is that the depression score decrease could have been a regression to the mean. Despite this significant decrease, the mean score for the participants was still in the clinical range, supporting their need for behavioral health treatment. We expected that there would be some change in social support; however, this did not occur. Although the intervention focused on how to improve social support, family and friends were not typically involved in the intervention, which may account for why social support from family, friends, and significant others did not improve.

Consistent with previous research, the perinatal women in this study encountered barriers to initiating behavioral health treatment. The most common barrier was lack of childcare. The intervention involved problem solving to address childcare, but it was not always successful. For example, there were instances in which childcare was arranged and it fell through the day of the appointment. Behavioral health agencies that provide treatment to perinatal women should consider expanding their services to provide childcare during the mother's sessions. Medication was viewed as a barrier to behavioral health treatment. Behavioral interventions for perinatal women with depression are greatly needed and making them accessible to a diverse group of women is critical. Both family conflict and social support were identified as impeding initiation. Several times, there was significant difficulty contacting the behavioral health agency. Although several potential agencies were identified, spending time trying to contact an agency without success wastes valuable time and can be discouraging for participants. This is a larger systemic issue that needs to be addressed. Other intervention models, such as collaborative care, have been developed to systematically screen and treat perinatal depression within health care systems with improved initiation and treatment outcomes.^{28,29}

LIMITATIONS

There are several limitations to the current study. This was a small pilot study with no control group; however, we were able to compare outcomes with behavioral health utilization rates from other published studies. The follow-up period was brief because the focus was on behavioral health initiation. Nonetheless, data about longer term outcomes

would have been beneficial because time to appointments varied. Additionally, although treatment was initiated, it was not clear if it led to treatment engagement, which was beyond the scope of the present investigation. Barriers to treatment engagement may differ from those of treatment initiation.

CONCLUSIONS

These findings demonstrate a promising behavioral health referral intervention for low-income, ethnic minority, perinatal women with mood disorders. Nonetheless, further research studying the intervention is needed, such as a randomized clinical trial with a longer follow-up period. Transfer of the intervention to be delivered by CHWs is an important next step because it will make the intervention more feasible and sustainable in a home visiting program.

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REFERENCES

1. Gaynes BN, Rush AJ, Trivedi M, Wisniewski SR, Balasubramani GK, Spencer DC, et al. A direct comparison of presenting characteristics of depressed outpatients from primary vs. specialty care settings: preliminary findings from the STAR*D clinical trial. *Gen Hosp Psychiatry*. 2005; 27:87–96. [PubMed: 15763119]
2. Viguera AC, Tondo L, Koukopoulos AE, Reginaldi D, Lepri B, Baldessarini RJ. Episodes of mood disorders in 2,252 pregnancies and postpartum periods. *Am J Psychiatry*. 2011; 168:1179–1185. [PubMed: 21799064]
3. Vesga-López O, Blanco C, Keyes K, Olfson M, Grant BF, Hasin DS. Psychiatric disorders in pregnant and postpartum women in the United States. *JAMA Psychiatry*. 2008; 65:805–815.
4. Diego MA, Field T, Hernandez-Reif M, Schanberg S, Kuhn C, Gonzalez-Quintero VH. Prenatal depression restricts fetal growth. *Early Hum Dev*. 2009; 85:65–70. [PubMed: 18723301]
5. Pearlstein T, Howard M, Salisbury A, Zlotnick C. Postpartum depression. *Am J Obstet Gynecol*. 2009; 200:357–364. [PubMed: 19318144]
6. Huang Z, Wong F, Ronzio C, Yu S. Depressive symptomatology and mental health help-seeking patterns of U.S.- and foreign-born mothers. *Matern Child Health J*. 2007; 11:257–267. [PubMed: 17171544]
7. Boyd, RC.; Mogul, M.; Newman, D.; Coyne, JC. [cited 2014 Feb 26] Screening and referral for postpartum depression among low-income women: a qualitative perspective from community health workers. *Depress Res Treat*. Internet; updated 2011 Apr 28; Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3096153/?tool=pmcentrez&report=abstract>
8. Dennis CL, Chung-Lee L. Postpartum depression help-seeking barriers and maternal treatment preferences: a qualitative systematic review. *Birth*. 2006; 33:323–331. [PubMed: 17150072]
9. O'Mahen HA, Flynn HA. Preferences and perceived barriers to treatment for depression during the perinatal period. *J Womens Health*. 2008; 17:1301–1309.
10. Lara-Cinisomo S, Griffin BA, Daugherty L. Disparities in detection and treatment history among mothers with major depression in Los Angeles. *Womens Health Issues*. 2009; 19:232–242. [PubMed: 19589472]

11. Ertel KA, Rich-Edwards JW, Koenen KC. Maternal depression in the United States: nationally representative rates and risks. *J Womens Health*. 2011; 20:1609–1617.
12. Boyd RC, Joe S, Michalopoulos L, Davis E, Jackson JS. Prevalence of mood disorders and service use among US mothers by race and ethnicity: Results from the National Survey of American Life. *J Clin Psychiatry*. 2011; 72:1538–1545. [PubMed: 21903030]
13. Kim JJ, La Porte LM, Corcoran M, Magasi S, Batza J, Silver RK. Barriers to mental health treatment among obstetric patients at risk for depression. *Am J Obstet Gynecol*. 2010; 202(3): 312.e1–312.e5. [PubMed: 20207252]
14. Smith MV, Shao L, Howell H, Wang H, Poschman K, Yonkers KA. Success of mental health referral among pregnant and postpartum women with psychiatric distress. *Gen Hosp Psychiatry*. 2009; 31:155–162. [PubMed: 19269536]
15. Flynn HA, Henshaw E, O'Mahen H, Forman J. Patient perspectives on improving the depression referral processes in obstetrics settings: a qualitative study. *Gen Hosp Psychiatry*. 2010; 32:9–16. [PubMed: 20114123]
16. Wallerstein NB, Duran B. Using community-based participatory research to address health disparities. *Health Promot Pract*. 2006; 7:312–323. [PubMed: 16760238]
17. Israel BA, Schulz AJ, Parker EA, Becker AB. Review of community-based research: assessing partnership approaches to improve public health. *Annu Rev Public Health*. 1998; 19:173–202. [PubMed: 9611617]
18. Israel BA, Schulz AJ, Parker EP, Becker AB. Community-based participatory research: policy recommendations for promoting a partnership approach in health research. *Educ Health*. 2001; 14:182–197.
19. Boyd, RC.; Worley, H. Utility of the postpartum depression screening scale among low-income ethnic minority women. In: Rosenfield, AL., editor. *New research on postpartum depression*. New York: Nova Science Publishers; 2007. p. 151-166.
20. Cox JL, Holden JM, Sagovsky R. Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. *Br J Psychiatry*. 1987; 150:782–786. [PubMed: 3651732]
21. First, MB.; Spitzer, RL.; Gibbon, M.; Williams, JBW. *Structured Clinical Interview for DSM-IV-TR axis I disorders research version patient edition. (SCID-I/P)*. New York: Biometrics Research, New York State Psychiatric Institute; 2002.
22. Sirey JA, Meyers BS, Teresi JA, Bruce ML, Ramirez M, Raue PJ, et al. The Cornell Service Index as a measure of health service use. *Psychiatr Serv*. 2005; 56:1564–1569. [PubMed: 16339619]
23. Beck, AT.; Steer, RA.; Brown, GK. *Manual for the Beck Depression Inventory–II*. San Antonio (TX): Psychological Corporation; 1996.
24. Zimet GD, Dahlem NW, Zimet SG, Farley GK. The Multi-dimensional Scale of Perceived Social Support. *J Pers Assess*. 1988; 52:30–41.
25. Baker DW, Williams MV, Parker RM, Gazmararian JA, Nurss J. Development of a brief test to measure functional health literacy. *Patient Educ Couns*. 1999; 38:33–42. [PubMed: 14528569]
26. Byatt N, Biebel K, Lundquist RS, Moore-Simas TA, Debordes-Jackson G, Ziedonis AJ. Patient, provider, and system-level barriers and facilitators to addressing perinatal depression. *J Reprod Infant Psychol*. 2012; 30:436–449.
27. Kelly, E.; Fulginiti, A.; Pahwa, R.; Tallen, L.; Duan, L.; Brekke, JS. [cited 2014 Feb 26] A pilot test of a peer navigator intervention for improving the health of individuals with serious mental illness. *Community Ment Health J*. Internet; updated 2013 Jun 7; Available from: <http://www.ncbi.nlm.nih.gov/pubmed/23744292>
28. Gjerdingen D, Crow S, McGovern P, Miner M, Center B. Stepped care treatment of postpartum depression: impact on treatment health and work outcomes. *J Am Board Fam Med*. 2009; 22:473–482. [PubMed: 19734392]
29. Yawn BP, Dietrich AJ, Wollan P, Bertram S, Graham D, Huff J, et al. TRIPPD: a practice-based network effectiveness study of postpartum depression screening and management. *Ann Fam Med*. 2012; 10:320–329. [PubMed: 22778120]

Table 1**Behavioral Health Referral Intervention Psychoeducation Content**

Session 1	
Psychoeducation about depression	
Symptoms and diagnoses of depression, including postpartum depression impact on children and parenting	
Treatment options	
Discussion of therapy and medication	
Assess clients preferences	
Navigation of mental health system	
Explain what will happen during initial telephone call, appointment and initiation of treatment	
Session 2	
Problem solving	
Discuss barriers to initiation of treatment and brainstorm ways to address barriers	
Social support	
Discuss benefits of social support and identify barriers to social support	
Develop practical plan to use support system to assist with initiation of treatment	
Communication with health care providers	
Discuss experiences communicating with health providers	
Identify ways to improve communication	

Table 2

Participant Demographics

Characteristic	Value
Mother's age, $M \pm SD$	23.97 $\pm$ 3.70
No. of children (range, 0–8), $M \pm SD$	2.50 $\pm$ 1.50
No. of household members, $M \pm SD$	4.53 $\pm$ 2.01
Beck Depression Inventory–II total score, $M \pm SD$	34.40 $\pm$ 11.80
Health Literacy total score, $M \pm SD$	32.7 $\pm$ 3.20
Receiving public assistance, n (%)	
Yes	32 (84.2)
No	6 (15.8)
Parent's education, n (%)	
8th–12th grade	20 (52.6)
High school grad/GED	6 (15.8)
Some college/vocational school	6 (15.8)
College/vocational school grad or higher	6 (15.8)
Maternal relationship status, n (%)	
Single/never married	28 (73.7)
Married/living together	7 (18.4)
Separated/divorced	3 (7.9)

Notes. GED, graduate equivalency diploma; M , mean; SD , standard deviation.