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Perinatal Antidepressant Use: Understanding Women's Preferences and Concerns

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Abstract

Perinatal depression is prevalent and linked with a host of adverse consequences for women and newborns. Rates of engagement in depression treatment are, however, strikingly low among pregnant and postpartum women, with the majority of affected women receiving no mental health treatment. Research indicates that perinatal women are extremely reluctant to take antidepressant medications, yet the nature of women's concerns and treatment decisionmaking patterns have not been well documented. Developing a clearer understanding of women's treatment preferences and behaviors may help identify solutions to the under-treatment of perinatal depression. In this mixed methods study, we conducted in-depth interviews with 61 pregnant women, approximately half of whom were experiencing clinical levels of depression. In addition to assessing psychiatric diagnoses, symptoms, and functional impairment, we conducted qualitative interviews addressing women's preferences for depression treatment, concerns, and decision-making patterns. Consistent with prior reports, women were significantly more likely to voice a preference for non-pharmacologic depression treatments, as opposed to antidepressant medications. Many depressed women reported a great degree of uncertainty regarding how to treat their depression, and those with more severe depression symptoms were more likely to endorse decisional conflict. Analysis of qualitative comments yielded detailed information about the nature of women's concerns and preferences related to use of antidepressant medications and other aspects of treatment engagement. We discuss findings in the context of improving patient-centered care for perinatal depression.

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Keywords

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Depression during the perinatal period is both common and impairing. According to recent prevalence data, approximately 13% of women experience an episode of major depression during the perinatal period.[1] Rates of depression have been found to be even higher among certain subgroups of perinatal women, including those from low-income and minority backgrounds.[2,3] Elevated symptoms of anxiety often co-occur with perinatal depression,[4,5] leading to a more complex symptom presentation and significant impairment. In spite of the prevalence of perinatal depression and clinical impairment associated with it, recent reports show that most affected women receive no mental health treatment.[6-8] The widespread under-treatment of perinatal depression is of concern in light of the numerous risks to both women and developing infants, including intrauterine growth retardation, low birth weight, and preterm birth, among other problems.[9]

In an effort to clarify and address reasons for lack of treatment engagement, researchers have begun to document women's preferences for perinatal mental health treatment and barriers to care. Consistent with findings from studies of non-perinatal populations, research on treatment barriers has highlighted a number of practical barriers, such as lack of insurance coverage, need for childcare, and other logistical difficulties with treatment access.[10,11] In terms of preferences for specific forms of treatment, emerging data indicate that most perinatal women have a preference for non-medication based treatments for depression.[11,12] Although a preference for psychotherapy over medication-based treatment has similarly been documented among non-perinatal depressed patients,[13] a particularly strong reluctance to pursue medication treatment appears to exist among pregnant and postpartum women. Several studies suggest that pregnancy is a time that is associated with higher rates of antidepressant discontinuation[14,15] and strong concerns about potential teratogenic effects of medications in general,[16] as well as specific concerns about antidepressants.[17] This concern is not surprising in light of reports raising questions about possible adverse fetal effects (for a review, see Udechuku et al.[18]) such as birth defects, neonatal toxicity, respiratory distress, and neonatal abstinence syndrome.

Antidepressant medications remain a primary option for treating depression, even during pregnancy[19,20]; therefore, many women face a decision regarding whether or not to engage in pharmacologic treatment for perinatal depression. The complexity of these decisions for both patients and providers has been acknowledged,[21,22] as it involves weighing the potential benefits versus risks of antidepressant medications as well as other forms of treatment, and keeping in mind that exposure to untreated maternal depression also involves risks to the infant. While women's general reluctance to take medications during the perinatal period is frequently noted,[11] no published research to date has elucidated the specific nature of women's concerns about perinatal antidepressant use. We know relatively little about how depressed perinatal women contemplate decisions about use of antidepressant medications during pregnancy and lactation, in terms of degree of conflict regarding the decision, factors considered as part of the decision-making process, and how

information is obtained to guide the decision. Indeed, much of the existing research regarding treatment preferences for perinatal depression has included general samples of perinatal women, rather than those who have experienced clinical levels of depression during pregnancy or the postpartum period.[12] Women who have experienced clinically significant depression during pregnancy or postpartum may have perspectives that differ from pregnant women who are asked hypothetically about the experience of depression and barriers to treatment. In fact, it has been noted in other populations that depressed individuals endorse stronger beliefs about stigma and barriers to treatment than their non-depressed peers.[23] Therefore, the goal of this preliminary investigation was to characterize the concerns, preferences, and motivations influencing women's mental health treatment preferences during the perinatal period, with a particular emphasis on attitudes related to use of anti-depressant medications.

As part of a larger, prospective investigation examining maternal depression and SSRI use during pregnancy and associated neonatal outcomes,[24] we obtained institutional approval to conduct focused qualitative interviews with 61 women in the third-trimester of pregnancy regarding their depression treatment experiences and preferences. The aims of this investigation were 1) to characterize women's experiences and difficulties with making treatment decisions about depression treatment, including attitudes regarding prenatal use of anti-depressant medications, among participants who had experienced antenatal depression, and 2) to assess hypothetical treatment preferences for postpartum depression among all participants (regardless of depression status).

METHOD

This study involved in-depth interviews with women enrolled in a prospective study focused on fetal and infant outcomes associated with depression during pregnancy and prenatal antidepressant use (N = 189). For details regarding overall study aims and methods, please refer to Salisbury et al.[24] In brief, depressed and non-depressed pregnant women in their second trimester were recruited via community recruitment strategies and completed an informed consent process. Women enrolled in the study completed diagnostic assessments and symptom severity measures at approximately 26 weeks and 36 weeks gestation, and again after the birth of the baby between 3 and 21 days postpartum. Eligible study participants included women between 18 and 40 years of age who were currently pregnant with a healthy singleton pregnancy. Exclusion criteria included illicit drug use during pregnancy, hypertension, diabetes, use of 10 or more cigarettes/day, or 0.5 alcoholic drinks/day during pregnancy. All study procedures were reviewed and approved by the hospital institutional review board.

Participants

For the study presented here, a subset of 61 participants in the parent study participated in an additional interview at approximately 32 weeks gestation to assess psychiatric symptom status, functioning, treatment-seeking behaviors, decision-making patterns, and preferences for depression care. This study was initiated at approximately the half-way point of the overall parent study. All participants who enrolled in the parent study from the halfway

point forward were contacted at 32 weeks gestation and given the option to participate in an additional phone interview that took approximately 20–40 minutes. Ultimately 61 participants were reached and completed this phone-based interview. Participants in this study's sample did not differ from the sample in the parent study as a whole on any demographic or pregnancy characteristics. Approximately half of the women in our sample (n = 31) comprised the depressed group and half comprised the non-depressed group (n = 30). Participants classified as being in the depressed sub-group met diagnostic criteria for a major depressive episode at some point during the current pregnancy on the Structured Clinical Interview for DSM-IV Axis I Disorders–Non-patient Edition (SCID-I/NP)[25] and/ or reported clinically significant symptom elevations on the Hamilton Rating Scale for Depression (HAM-D)[26] during the current pregnancy (score of 8 or above). Participants were classified as being in the non-depressed group if they did not meet the diagnostic criteria for major depressive disorder on the SCID-I/NP interview and did not report significant elevations on the HAM-D depression severity interview.

Procedure and Measures

Baseline assessment interview at 26 weeks gestation—During the in-person maternal baseline interview at 26 weeks gestation, trained research interviewers administered the SCID-I/NP.[25] In addition, standardized interviews were administered to assess the severity of depression (HAM-D[26]) and the severity of anxiety (Hamilton Rating Scale for Anxiety [HAM-A][27]). Participants also completed several other validated self-report measures including the Beck Depression Inventory (BDI),[28] the State-Trait Anxiety Inventory (STAI),[29] and the Family Assessment Device (FAD).[30] Finally, we assessed demographic characteristics, including the Hollingshead Four Factor Index of Social Position,[31] as well as maternal health characteristics and utilization of mental health treatment.

Treatment decisions interview at 32 weeks gestation—During a phone-based assessment interview at 32 weeks gestation, the SCID-/NP, HAM-D, BDI, and FAD were re-administered to participants. Changes in medication and mental health treatment use were recorded. Participants in the depressed subgroup also participated in a semi-structured qualitative interview assessing their experiences and preferences with regard to depression treatment, process of engaging in treatment, and barriers that prevented engagement in care. In addition, we administered the Decisional Conflict Scale (DCS)[32] to women in the depressed subgroup to examine the degree to which they reported decisional conflict and uncertainty with regard to their depression treatment decisions during the current pregnancy. All women, regardless of depression status, were administered a brief interview regarding hypothetical preferences for depression treatment, should they experience a depressive episode after having their baby. In this phase of the interview, women were asked to rate and rank several specific forms of depression treatment, and provide explanations for the top choices they had selected.

Data analysis—Quantitative data obtained from questionnaires, self-report measures, and structured interviews were analyzed with SPSS software 19.0, including calculation of means, standard deviations, and frequencies to describe sample characteristics, and t-tests

and chi-square analyses to examine differences among groups based on depression treatment status and level of decisional conflict. In terms of qualitative analysis, all comments during the indepth qualitative interview were first recorded verbatim. To develop a codebook for the analysis, two authors (CLB, CAS) read a subset of 20% of the interviews, and each independently developed a comprehensive categorization system to classify women's comments. Few differences existed between the two coding systems; differences that did arise were resolved in a collaborative fashion. Next, two authors (CAS, SO-H) used the resulting codebook to independently rate the entire set of qualitative interviews. Once ratings were completed, each interview was reviewed to examine which codes were agreed upon, and where differences existed. In the majority of cases, codes were in agreement; discrepant codes were discussed with an additional author (CLB) until 100% consensus was reached for all codes in the narrative dataset. This method of analysis is consistent with qualitative coding techniques described by Crabtree and Miller[33] and has been used in prior research examining patient preferences for treatment.[34]

RESULTS

Demographic and clinical characteristics of the participants based on the baseline assessment at 26 weeks gestation are presented in Table 1.

Demographic Characteristics

Participants ranged in age from 19 to 39 years old, with mean age of 28.7 years (standard deviation [SD] = 5.7 years). Overall, two-thirds of the sample (67%) were married or in a similar committed relationship at the time of the initial assessment. The majority (71%) identified their race/ethnicity as Caucasian, 20% as Hispanic, 2% as Black/African-American, and 7% as another racial/ethnic group, or multiple groups. In this sample, no differences existed between depressed versus non-depressed participants with regard to number of pregnancies, children living at home, or race/ethnic background. Compared to non-depressed participants, depressed women were significantly more likely to be single ($x^2(1) = 13.9$, $p < 0.001$), younger ($t(58) = 2.1$, $p < 0.05$), and have a lower socioeconomic status ($t(59) = –2.7$, $p < 0.01$).

Clinical Characteristics

At intake, women in the depressed sub-group reported depressive symptoms in the mild–moderate range (mean score on the 17-item HAM-D = 11.4; SD = 5.9; mean BDI score = 15.8; SD = 9.5). In addition to heightened symptoms of depression, participants in the depressed sub-group exhibited higher levels of anxiety than women in the non-depressed group on both interviewer-rated (HAM-A; $t(59) = –7.9$, $p < 0.001$) and self-report anxiety scales (STAI; $t(58) = –7.1$, $p < 0.001$). The depressed sub-group also reported greater impairment in their marital/family relationships on the FAD ($t(37) = –4.9$, $p < 0.001$). Group differences in anxiety and functional impairment remained significant even after controlling for covariates of socioeconomic status, age, and marital status.

Depression Diagnosis and Treatment Engagement

Twenty-six of 31 women (84%) in the depressed subgroup met diagnostic criteria for major depressive disorder at some point during the current pregnancy. The remaining women experienced elevations in antenatal depression symptoms based on the HAM-D interview. Approximately two-thirds of the depressed sub-sample were engaged in depression treatment (either pharmacological or non-pharmaco-logical) at some point during the pregnancy (n = 22; 71%); the remaining women did not receive any depression treatment. Of those women receiving depression treatment during all or part of the current pregnancy, 5 were engaged in psychotherapy, 6 were taking an SSRI, and 11 were engaged in combination treatment (psychotherapy plus an SSRI).

Treatment Decision-Making for Antenatal Depression

In terms of decision-making, we found that it was common for women in the depressed subgroup to report significant decisional conflict concerning antenatal depression treatment. In this sample, total DCS scores ranged from 0 (no conflict) to 83 (very significant conflict), with a mean score of 35 (SD = 23). Approximately one-third of the women who completed the DCS (8 of 26) had DCS uncertainty scores in the clinical range, suggesting a high degree of uncertainty and confusion about their depression treatment decision. Most women with elevated uncertainty scores (63%) were either untreated (i.e., not receiving any psychotherapy or antidepressant medications), or were only inconsistently engaged in treatment during pregnancy.

In addition, women with greater uncertainty about their treatment decisions also reported higher levels of depression. Women with heightened decisional conflict, above the median split, had a baseline mean BDI score of 20.3 (SD = 10.2), whereas women with lower decisional conflict averaged 10.7 (SD = 7.6) on the BDI ($t(23) = 2.4$, $p < 0.05$). Although it did not reach statistical significance, a similar pattern was observed on the HAM-D depression measure at both baseline and 32 weeks gestation. There was also a trend for women who were depressed for the majority (75% or more) of the pregnancy to endorse higher levels of decisional conflict (mean = 42.4, SD = 28.7), compared to women who were depressed for a shorter duration of the pregnancy (mean = 29.4, SD = 17.8; $t(24) = 1.4$, $p = 0.16$).

To provide more in-depth information regarding the nature of women's dilemmas regarding depression treatment decisions during pregnancy, we examined common themes that emerged from the qualitative interviews regarding women's experiences in depression treatment and their process of decision-making. Notably, not all depressed women voiced conflict regarding antenatal depression treatment. Some women expressed positive comments both with regard to psychosocial treatments and use of antidepressant medications. A number of women remarked that medication and/or psychotherapy had been helpful to them or to someone in their family in the past. Others noted that obtaining some form of treatment during pregnancy would be a critical step in preventing a more serious episode of depression later in pregnancy or during the postpartum period. Many women voiced the belief that they might use antidepressant medications, but only as a "last resort," and expressed a strong interest in receiving a psychosocial treatment initially. In all, the

majority of positive statements that were voiced by pregnant women regarding depression treatments related to psychotherapy; the majority of negative statements regarding depression treatments related to antidepressant medications.

Given the significant degree of concern focused on prenatal use of antidepressant medications, we conducted a qualitative analysis of the most dominant themes that emerged with regard to this form of treatment. As shown in Table 2, the most common concerns that women expressed with regard to anti-depressant medications included 1) fear of possible adverse effects on the developing baby, including non-specific worries about a negative outcome, as well as specific concerns (e.g., premature birth, deformity, withdrawal symptoms); 2) strong maternal feelings of shame, guilt, and confusion about prenatal use of antidepressant medications; and 3) general discontent with using and potentially becoming dependent on antidepressant medications.

We also examined themes that arose concerning the general process of decision-making and treatment engagement for antenatal depression. These comments were in response to questions regarding the manner in which women obtained information about treatment options and factors that played a role in whether or not they sought care. Many women described speaking with clinicians (particularly prenatal care providers), friends, or family members about their treatment decision; others reported searching for information about treatments on the Internet, in books, and scientific journal articles. Although many women noted that they had sought input from others, a significant subset remarked that they did not seek any input from anyone in making the decision—or that they had attempted to talk to others about it but found that others were unsupportive or unhelpful. Several women remarked that their partners or family members told them to “just deal with it” when coping with depression symptoms and did not support the notion of mental health treatment. One woman stated that she avoided talking to her doctor about her decision to discontinue antidepressant medication during pregnancy because “I knew the doctor would tell me not to stop.” Other common themes with regard to the decision-making process included a sentiment shared by many women that they would seek depression treatment advice from their obstetrician, midwife, or other prenatal care provider (“They will guide me to the right thing to do.”). Women with histories of depression often reported that their prior treatment experiences were important in shaping their current decisions. Finally, it was frequently noted that the impact of treatment—as well as of depression symptoms—on the developing baby was a highly significant factor in making treatment decisions.

Treatment Decision-Making for Postpartum Depression

All women, regardless of depression status during pregnancy, were asked about their preferences for various types of depression treatment, should they experience a future postpartum episode of depression. When asked to indicate their first choice for treatment, the majority indicated some form of psychotherapy (62%), including individual, family, or group therapy. (“I think, through counseling and support, I could handle it”; “[Therapy] is easiest and most convenient.” “I would prefer not to take meds.”) The next most-preferred strategy for managing depression, endorsed by 15% of women, was use of a complementary or alternative treatment, for example engaging in exercise, walking, yoga, omega-3 fatty

acids, or bright light therapy. One person remarked “Alternative or natural remedies seem logical to me. I don’t want medications and I don’t like talking to people.” Another stated: “Walking, exercise, yoga—it’s a relaxer for me and helps improve my mood. It clears my head, and I feel better about myself when I exercise.” Next, 8% preferred use of antidepressant medications (“My husband had some problems with depression and meds have been helpful for him—so I know that they can be helpful for some people”). Seven percent indicated that they would speak to their prenatal care providers and follow their advice. Finally, 5% indicated interest in a local specialized mother-baby day hospital for postpartum women,[35] and 3% stated they would pursue a spiritual or religious approach to treatment. The majority of women indicated plans to breastfeed exclusively (79%), with the remaining 21% indicating plans to use formula or a combination of formula and breast milk. Among women in the non-depressed group, 86% voiced interest in exclusive breastfeeding; the proportion of depressed women who expressed interest in exclusive breastfeeding was somewhat lower (73%) but the difference was not statistically significant.

Similar to the comments made regarding antenatal depression treatment decisions, women noted that the possible effect of antidepressants on the baby through breast milk exposure was very important in making decisions about treatment. A common theme voiced by many women was that they would not pursue antidepressant medication if it meant that they could not breastfeed, or if there was a risk of infant exposure to the medication. One woman stated “I would do anything as long as I don’t have to stop breastfeeding” and another noted “I would try to pursue breastfeeding as long as I could. I would try everything else before stopping breastfeeding.”

DISCUSSION

In light of the under-treatment of perinatal depression, this investigation aimed to provide an initial characterization of women’s process of decision-making for depression treatment during the perinatal period, with a focus on concerns about use of antide-pressant medications. The study had several key findings. First, consistent with prior research documenting high levels of anxiety[4,36] and relationship distress[37,38] associated with perinatal depression, we found that women in our depressed sub-sample were impaired by significant levels of comorbid anxiety as well as elevated distress in family relationships, further underscoring the need for treatment for this patient population.

Second, we found that depressed perinatal women often experience a high degree of decisional conflict regarding whether and how to treat their depression. This is of particular concern in that women with heightened decisional conflict also tended to exhibit the most intense depression symptoms. Further, a trend suggested that this vulnerable group of women was less likely to engage in treatment compared to women with lower levels of decisional conflict. While one interpretation of these findings is that perinatal depressed women struggle with decision-making as do other depressed individuals, it is also possible that difficulty understanding treatment options and making a decision could also lead to heightened distress for women and represent a barrier to treatment engagement. In other medical populations, decisional conflict can lead to a delay in making important treatment decisions.[39] Similarly, perinatal women may be prone to delaying engagement in treatment

or failing to engage in care altogether when they are experiencing decisional conflict. Women who are most symptomatic could be also those most conflicted about how to access help, thus leading to a potentially harmful delay in treatment engagement.

Third, consistent with prior reports,[11] we found that perinatal women were primarily interested in pursuing non-pharmacologic depression treatments, including both psychotherapy and alternative forms of depression treatment, and that many women voiced strong concerns regarding use of antidepressant medications. Our study extended previous work on perinatal treatment preferences by utilizing qualitative methodology to elucidate the specific nature of women's concerns about use of antidepressant medication. Not surprisingly, women frequently noted concerns about antidepressants harming the developing baby. The nature of feared medication effects included withdrawal symptoms, premature delivery, childhood learning disabilities, and other concerns. Moreover, women expressed strong emotions regarding use of antidepressants during pregnancy or lactation, including guilt, shame, confusion, anxiety, as well as fear of becoming dependent. It is possible that the intense emotions reported by some women could lead to difficulty communicating openly with providers—and in some cases, reluctance to disclose depressive symptoms altogether. Indeed, some participants reported avoiding discussions with clinicians out of concern that their treatment choice would not be understood or supported. In a prior study, Jomeen and Martin[40] similarly reported that some depressed postpartum women would not disclose depression symptoms to providers out of concern that they would be labeled as having a mental illness, or told they needed to take antidepressant medication. Together with the results of the study presented here, this work not only highlights concerns regarding use of antidepressant medications, but also the relevance of perceived stigma as a barrier to communicating with providers and accessing mental health treatment.

Implications

Findings from this study point to a need for greater decisional support for depressed perinatal women, as well as enhanced support and training for clinicians who provide care for these patients. Decision aids have increasingly been offered for patients encountering difficult medical decisions (e.g., whether to initiate hormone replacement therapy or selecting a cancer treatment), and can encompass a variety of strategies, including supported brief interventions, written materials, or web-based interactive decision tools. These decision support strategies aim to increase patient knowledge regarding medical conditions and treatment options, help patients clarify their values and preferences with regard to various treatments, outcomes and treatment risks, and provide guidance in the steps of decision-making.[41] While much of existing research on decision support has focused on concerns related to physical health conditions, attention to the need for decision support in mental health care, in particular depression care, has increased.[42-44] Promoting increased patient involvement in decision-making has been shown to improve care and long-term outcomes among depressed primary care patients.[45] Structured decision support may also prevent women from being assigned a treatment option that is not preferred, avoiding problems, such as high attrition and poor treatment alliance, that are known to occur when depressed patients do not receive a form of treatment that is acceptable to them.[46] Providing increased psychoeducation as part of the decision-making process may also help patients feel more

comfortable with certain treatment options—including antidepressant medications—as information is discussed regarding the known risks and potential benefits in the context of an individual's symptoms and treatment needs.

Tailored decision support may not only lead to the provision of higher quality care to patients, but may provide critical support for providers as well. Research indicates that it is not uncommon for obstetricians to experience a low level of comfort talking with patients about depression[47] and that they are likely to approach discussions with patients regarding depression treatment decisions in idiosyncratic ways, with the content and style of the conversation depending upon the provider's training, experiences, and personal views. This lack of comfort experienced by some obstetricians may partially explain why prenatal care providers do not consistently discuss depression symptoms openly with patients, even after symptoms are detected through depression screening.[48] This variability in whether or how clinicians broach the subject of depression treatment with patients contrasts with literature describing how important an open, communicative, interactive style is to patients. Recent qualitative research with depressed perinatal women noted the importance of patients' sense of being able to talk openly and "feel heard" by their clinicians when discussing depression.[10] Similar findings were reported by Patel et al.,[49] noting that perinatal women voiced interest in a style of decision-making with their provider that was open, active, and collaborative in nature. In light of the effectiveness of decision support aids and shared decision making interventions with other medical populations[41,50] and the complex treatment decisions associated with perinatal depression, development of targeted decision-support tools and shared decision-making strategies could be highly valuable for this patient population.

Placing greater emphasis on understanding and responding to the unique needs and preferences of perinatal patients is consistent with our healthcare system's growing emphasis on patient-centered care,[51] and specifically on incorporating patients' views in healthcare decisions.[52] In addition to involving patients more actively in treatment decision-making, findings of the current study provide support for the importance of continued development and evaluation of non-pharmacologic interventions for perinatal depression, as most pregnant and post-partum women find these approaches to be more acceptable than antidepressant medications. Guidelines for treating depression during pregnancy note that mild-moderate perinatal depression can often be managed successfully with psychotherapy alone.[20] While several promising psychotherapies have been evaluated for depression during the perinatal period, many trials have been limited by lack of a randomized controlled design, inadequate assessment of long-term outcomes, or other methodological issues.[53] Thus more work is needed in this area. In addition to further development of tailored psychotherapies for perinatal depression, our findings suggest that it will be important to empirically examine the safety, feasibility, and efficacy of alternative treatments for perinatal depression, such as exercise interventions, yoga, light therapy, omega-3 supplements, and other strategies. A number of alternative depression treatments have been shown to be safe and efficacious for patients with non-perinatal depression,[54,55] yet relatively little work has focused on perinatal depression so the safety and efficacy of these treatments in this population are less clear. Ultimately, developing a wider range of treatment options that are not only safe and efficacious, but also more acceptable to perinatal

women, could increase the likelihood that more depressed perinatal women will initiate and actively remain in care.

Limitations

This study had several limitations that should be noted. First, an important limitation of this study was its relatively small sample size. While a sample of 61 women was adequate for addressing the qualitative questions,[56] some of the group comparisons utilizing quantitative measures may have failed to reach statistical significance due to the relatively small size of the sub-groups being compared. Moreover, the sample, which was a subset of participants in a naturalistic study of fetal and neonatal outcomes associated with maternal depression and SSRI use, may not have been representative of the general population of perinatal women. Finally, the sample did not have sufficient cultural and ethnic diversity to allow for examination of cultural factors affecting the treatment engagement process. This is important in that some beliefs about depression treatment, medication use, and the experience and interpretation of depression symptoms may differ meaningfully across cultural groups.[57-59] To address these limitations, our group is conducting a larger NIH-funded study examining engagement in perinatal depression treatment and barriers to care among a larger sample of women, including a significant proportion of women from racial/ethnic minority groups.

CONCLUSION

The goal of this study was to clarify treatment concerns that may account for the fact that most depressed perinatal women do not seek any form of treatment for their depression symptoms. We found that levels of decisional conflict are high among depressed perinatal women and identified a number of specific concerns relevant to the use of antidepressant medication. In terms of preferences, psychotherapy was noted to be a top choice among the majority of women, yet other non-pharmacologic approaches, such as exercise-based interventions, were also highly acceptable. More research is needed to systematically develop and evaluate specialized approaches for treatment of perinatal depression. Moreover, greater attention should be paid to the development of decision-support aids and interventions to assist both care providers and perinatal patients in navigating the challenging decisions about depression care during the perinatal period.

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Table 1

Demographics and clinical characteristics of participants

	Depressed group	Non-depressed group
	Mean (SD)	***Mean (SD)***
Age (yrs)	27.3 (5.9)	30.3 (5.0)[a]
Total pregnancies (*n*)	2.7 (1.6)	2.3 (1.4)
Living children (*n*)	0.94 (.9)	0.67 (0.9)
Index of social position	40.6 (12.5)	48.6 (10.2)[b]
	Frequency	***Frequency***
Marital Status		
Single	54.8%	10.0%[c]
Married/committed relationship	45.2%	90.0%
Race/ethnicity		
Caucasian/ non-Hispanic	67.7%	76.6%
Hispanic	22.6%	16.7%
Black/African-American	0.0%	3.3%
Other	9.7%	3.3%
	Mean (SD)	***Mean (SD)***
Depression severity (HAM-D)	11.4 (5.9)	5.8 (2.1)[c]
Depression severity-- self-report (BDI)	15.8 (9.5)	9.4 (2.4)[c]
Anxiety severity (HAM-A)	10.7 (5.0)	2.8 (2.1)[c]
Trait anxiety- self-report (STAI)	45.6 (11.8)	28.6 (7.2)[c]
State anxiety- self-report (STAI)	41.6 (11.3)	26.3 (5.8)[c]
Family functioning (FAD)	2.0 (0.58)	1.2 (0.26)[c]

SD: standard deviation; HAM-D: Hamilton Rating Scale for Depression; BDI: Beck Depression Inventory; Ham-A: Hamilton Rating Scale for Anxiety; STAI: State-Trait Anxiety Inventory (STAI), FAD: Family Assessment Device

[a] $p < 0.05$;

[b] $p < 0.01$;

[c] $p < 0.001$

Table 2

Common concerns regarding prenatal use of antidepressant medications

1.	***Fear of adverse effects on developing baby***
	"[I discontinued Zoloft] out of my concern. There is research on medications showing that babies can have withdrawal symptoms. I wanted to avoid that."
	"[I discontinued Paxil because] I was afraid to hurt my baby. Maybe when she's born she might need to take the drug because she's addicted to it—or she may be deformed, or born a preemie." [Discontinuing] was definitely not an easy decision to make, because I knew it was doing me good but I don't want to take too many medicines—because I didn't want my baby to be hurt."
	"I figured, until I'm not pregnant, I'll just have to deal with [the depressed mood]. I'm not totally against meds. But I don't know…I don't know if I'd pursue [antidepressant] treatment like that. I am concerned about the unknown. There are always side effects from medications. They do lots of tests on animals and stuff, but they don't really know the impact on babies. I think that taking nothing at all is the best thing if you are pregnant."
	"If I was taking [Zoloft], how would it affect the baby, the fetus? Would there be long-term effects later as a child? Am I setting the child up for being depressed as an adult? Also, immediately after the delivery I was warned about what would happen when the baby was suddenly no longer getting the Zoloft."
2.	***Shame, guilt and conflicted feelings regarding use of antidepressant medications***
	"If I took [an antidepressant] it would be on my conscience. It would kill me if there was ever something wrong. Like, if later our child had a learning disability or an abnormality—either physical or some other type of abnormality. I'd worry: what if that was the cause? You just don't know what the impact is on the baby. It would be on my conscience forever."
	"I don't tell other people [that I am taking an antidepressant during pregnancy] because I feel ashamed of it. I don't tell anybody. My mother doesn't know. I feel like a heroin addict. I feel like I'm doing something secret and bad."
	"The main reason [that I stopped taking Zoloft again] was a worry that I was doing something to the baby. But I struggle with: If I don't take it, I'm hurting my children by being more impaired. I yell more, I'm more anxious, I cry. [My depression symptoms] are confusing to them because they don't understand. It makes me feel awful."
3.	***General discomfort with use and dependence on antidepressant medications***
	"[I would opt for psychotherapy over medications] because I think that going on medications is a bit extreme. If you take meds, then you don't function as you should. I'd worry that maybe it would create a dependence. I don't like meds too much. If I'm sick I'll try to get better without them. I would only take it if I were extremely depressed and my doctor told me to do it—only if there was no other option."
	"[I decided not to pursue any treatment] because I'd prefer to deal with it on my own. I don't like medications. I don't like taking them. I wouldn't take depression medications or things like that—I don't put things like that into my body. I wouldn't—and I won't do that to my baby."
	"I don't want meds. I know some people go on meds and they can't get off—they are addicted. You never know if that could happen. If I can solve a problem without meds, then I'd rather do it that way."