Background

• Approximately 12% of women experience perinatal depression (PND - depression during pregnancy and/or the postpartum)\(^1\).
• Underserved minority women experience higher rates of PND, but lower rates of follow-up and referral for treatment\(^2\).
• We implemented a computerized adaptive test (CAT-MH\(^TM\)), including a diagnostic screen for MDD (CAD-MDD) and a measure of severity of depressive symptoms (CAT-DI)\(^3\).

Aims

Aim 1: To measure rates and concordance of CAT-MH\(^TM\) measures with PHQ-9 (cut-off ≥10) and determine clinical validity of cases by examination of medical records.

Aim 2: To compare rates of PND and depressive symptom severity on CAT-MH\(^TM\) and PHQ-9.

Methods

• 229 women (47% Black, 29% Latina) from an urban university obstetrics outpatient clinic were evaluated using the CAT-MH\(^TM\) and PHQ-9 up to 4 times during pregnancy and postpartum as part of a longitudinal study of perinatal mental health.
• Using CAD-MDD diagnosis as the true condition and PHQ-9 as the predicted condition, we classified women into four categories:
  - True Positive (+PHQ9/+CAD-MDD)
  - True Negative (+PHQ9/-CAD-MDD)
  - False Alarm (-PHQ9/+CAD-MDD)
  - Miss (-PHQ9/-CAD-MDD)
• We ran a series of chi-square analyses and linear models with predictors including income, education, relationship status, age, weight, trimester, desire for pregnancy, and insurance to predict “miss” cases. We also ran a series of spearman correlations.

Results

Table 1. CAD-MDD detected ~4% more instances of PND compared to the PHQ-9 in the total sample (p = .05) and the Black (p = .12) and Hispanic (p = .6) population.

<table>
<thead>
<tr>
<th></th>
<th>Total sample PND Rate per Visit (532 visits)</th>
<th>African American PND Rate per Visit (254 visits)</th>
<th>Latina PND Rate per Visit (150 visits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD-MDD</td>
<td>14.93%</td>
<td>15.35%</td>
<td>13.33%</td>
</tr>
<tr>
<td>PHQ-9</td>
<td>10.69%</td>
<td>10.24%</td>
<td>10.67%</td>
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</table>

Figure 1. True positive, true negative, miss, and false alarm cases including (a) the percentage of women in each category, (b) distribution across PHQ-9 scores and CAD-MDD, and (c) distribution of CAT-DI severity across PHQ-9 and CAD-MDD.

Conclusions

• CAD-MDD detected ~4% more instances of PND compared to the PHQ-9 in a sample consisting of a high percentage of African American and Hispanic women.
• Most cases of PND detected by CAD-MDD alone were mild cases with PHQ-9 scores nearing the cut-off of 10.
• Medical records confirmed diagnosis in 21 cases, disconfirmed in 2, and 10 did not have available clinical notes. This finding serves to confirm the sensitivity of the CAT-MH in detecting cases of PND over the PHQ-9.
• Implementation of the CAT-MH as part of routine prenatal clinic care could serve to remedy the health disparity in referral and diagnosis of PND in the clinical setting, as minority women are often under-referred and under-diagnosed.
• A validation study including diagnostic interviews to determine whether the CAT-MH is detecting true positive versus false negative results in underway.

References


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