Racial/Ethnic Disparities in Antenatal Depression in the United States: a Systematic Review

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Outline
- Antenatal depression
- Rationale behind this review & Objectives
- Methods
- Summary of the studies
- Prevalence and distribution of antenatal depression
- Conclusion & recommendations
- List of eligible studies

Emily Guillermo had a joyous experience becoming a mother to Christopher, at right, even though her husband, Jeff, was deployed with the Army in Iraq during her first pregnancy. But then when she became pregnant with Benjamin, she felt “like my body had been invaded.”

Ivan Pierre Aguirre for The New York Times
“...I became too aimless to do anything... I had the sense of a figure towering over me. He was about 20ft high and draped in black... I haven’t experienced a single positive thought about this baby,” I confessed to Alan, and then cried at the baby’s predicament, having a mother who couldn’t love it.... What changed? Seeing my baby on a scan towards the end of the first trimester.... I marvelled at his wholeness, his unimpeachable sovereignty, his mighty little republic of self...... And although the statistics tell me that the figure in black is likely to return in his more familiar role of postnatal depression, it’s OK because I now know that, like the hormones that conjured him, eventually he’ll ebb away.”

Excerpts from Antenatal depression: ‘I cried at my baby’s predicament’ by Claire Kilroy; published in The Guardian, Friday September 2012

Antenatal depression

- 10-33% of pregnant women: mental health problems.
- 5%-30% of pregnant women: depressive symptoms.
- 13-20% of pregnant women in the U.S. experience depressive symptoms.
- Challenges with depression during pregnancy
  - Concern about safety of antidepressants
  - Overlap of symptoms with those of normal pregnancy
  - High-risk of relapse

Antenatal depression: consequences

- Gestational hypertension
- Spontaneous abortions
- High-risk behaviors
- Maternal suicide
- Epidural anesthesia and operative deliveries
- Preterm birth
- Low birth weight (LBW) infants
- Higher rates of malnutrition, stunting, diarrhoea and other infectious diseases
- Decrease in breastfeeding initiation
- Postpartum depression

Rationale behind this systematic review

- Disparities in depression prevalence exist in adult population: Nearly 13% of non-Hispanic blacks and 11.7% of Hispanics compared with 8% of non-Hispanic whites.
- Various pregnancy outcomes, including preterm birth and low birthweight, are more prevalent in non-whites, compared to whites.
- Differences in maternal mental health might account for some of the unexplained racial/ethnic disparities in perinatal outcomes.
- No conclusive evidence regarding racial/ethnic distribution of depression among pregnant women.

http://www.theguardian.com/lifeandstyle/2012/sep/08/claire-kilroy-antenatal-depression

Aims of this systematic review

- To summarize existing literature concerning racial/ethnic disparities in prevalence of antenatal depression in the U.S.
- To examine how risk factors/correlates of antenatal depression vary by racial/ethnic groups.

Methods

- Extensive electronic search for all published articles till October, 2014.
- Keywords: (“depression” or “depressive” or “mental” or “psychological”) and (“pregnant” or “pregnancy” or “antenatal”; and “race” or “racial” or “ethnic”).
- Databases: PubMed, CINAHL Plus with full texts and PsycINFO.
- Titles and abstracts screened.
- Full-texts reviewed for eligibility.

Inclusion criteria

- Research articles published in peer-reviewed journals.
- Study sample included pregnant women, or, asked questions pertaining to their most recent pregnancy.
- Study conducted in the U.S.
- Provides data on the prevalence of depressive symptoms (physician-diagnosed; self-reported; or, measured by questionnaire) during pregnancy.
- Describes the racial/ethnic distribution of antenatal depression.

Exclusion criteria

- Full texts could not be obtained.
- Full text not in English.
- Case studies and systematic reviews.
- All study participants belonging to single race/ethnicity.
- All study participants were depressed at baseline, or, had a history of depression.
Study quality assessment

Standard quality assessment criteria (Kmet, Lee & Cook, 2004)

1. Question / objective sufficiently described?
2. Study design evident and appropriate?
3. Method of subject/comparison group selection or source of information/input variables described and appropriate?
4. Subject (and comparison group, if applicable) characteristics sufficiently described?
5. If interventional and random allocation was possible, was it described?
6. If interventional and blinding of investigators was possible, was it reported?
7. If interventional and blinding of subjects was possible, was it reported?
8. Outcome and (if applicable) exposure measure(s) well defined and robust to measurement / misclassification bias? means of assessment reported?
9. Sample size appropriate?
10. Analytic methods described/justified and appropriate?
11. Some estimate of variance is reported for the main results?
12. Controlled for confounding?
13. Results reported in sufficient detail?
14. Conclusions supported by the results?

Scoring

- Each criteria has response options yes, partial, no and N/A.
- Total sum = (number of “yes” * 2) + (number of “partials” * 1)
- Total possible sum = 28 - (number of “N/A” * 2)
- Summary score: total sum / total possible sum.
- Possible range of summary scores: 0-1.

Summary of the studies

- 39 articles met eligibility criteria
- Two articles used same sample as two other articles (i.e. based on same study).
- Sample sizes: vary widely; range from 56 to 19,219.
- Two studies included pregnant smokers only.
- Some used convenience samples; others did random sampling.

Figure 1: Results of search strategy
Summary of the studies (contd.)

- Types of study: Cross-sectional (23 out of 40 studies); prospective cohort (15); randomized clinical trial (2).
- Highest number of studies in North Carolina and Michigan: Five each.
- One study used U.S. nationwide Data from NHANES.
- Scores for studies included in this review: 0.68-0.96.

Settings: Mostly urban and suburban; 2 studies specified that rural areas were included (Missouri and a Southeastern community).

Participants recruited from: Federally Qualified Health Centers (FQHCs); community obstetric/gynecologic clinics; university-based hospitals and prenatal clinics.

Studies also involved analysis of medical records, baseline data from longitudinal studies (e.g. Health Status in Pregnancy Study); and survey data.

Some studies specifically focused on low-income women, inner-city women, and minority women.

Instruments used

- Center for Epidemiologic Studies Depression (CES-D) Scale: 14 articles.
- Patient Health Questionnaire (PHQ): 4 articles
- Edinburgh Postnatal Depression Scale (EPDS): 4 articles.
- Beck Depression Inventory (BDI): 8 articles.
- Others: New York Statewide Perinatal Data System (SPDS) measure of depression; Structural Clinical Interview for DSM-IV (SCID); Diagnostic Interview Schedule (DIS)-IV; PRIME-MD.
- Standardized questionnaires; self-reports of diagnosis.

Antenatal depression: prevalence

- Some studies categorized participants as depressed vs. non-depressed (or mild, moderate and severe depression) according to a cut-off.
- Others described mean & standard deviation of scores.
- Prevalence for most studies: 10% to 30%.
- Lowest prevalence: 5.1%
  Sample: 1997 women receiving prenatal care in a university clinic; 69% non-Hispanic white.
- Highest prevalence: 51%
  Sample: 85 Hispanic and 63 African-American women.
Racial/ethnic distribution

- Majority of studies: Higher prevalence among Hispanics and non-Hispanic blacks, compared to non-Hispanic whites.
- Blacks and Hispanics were found to have up to 5 and 2 fold increased odds respectively.
- Prevalence among non-Hispanic whites: 3% to 28%.
- Prevalence among non-Hispanic blacks: 15% to 49%.
- Prevalence among Hispanics: 13% to 35%.
- In some studies Asians had significantly higher odds compared to whites.

Racial/ethnic distribution (contd.)

- Study among pregnant women receiving WIC services in rural and urban Missouri: A higher prevalence of 12-month major depressive disorder among Caucasians (9.5%; 95% CI: 4.8-9.7) than African-Americans (7.2%; 95% CI: 6.3-12.7).
- In some cases: racial/ethnic differences were not statistically significant, especially after adjusting for covariates.
- Few studies found that the prevalence of antenatal depression among Latinas was comparable to, or, even lower than non-Hispanic whites.

Conclusions

- Different instruments with different cut-offs have been used to assess antenatal depression.
- Most studies are clinic-based and conducted in urban areas.
- Prevalence of antenatal depression varies widely.
- In general, the prevalence is higher among minorities, including African-Americans and Hispanics.
- Attempts to examine risk factors of depression among pregnant women, by race/ethnicity are rare.

Recommendations

- More population-based studies are necessary to examine the prevalence and distribution of antenatal depression.
- Studies focusing on American Indians and Asian Americans/Pacific Islanders.
- More studies need to be conducted in the rural areas in different parts of the country.
- Instead of having race/ethnicity as a covariate, it might be interesting to stratify and examine how the correlates vary.
- Inclusion of antenatal depression in Nationwide surveys, such as PRAMS.
List of eligible studies


List of eligible studies (contd.)


List of eligible studies (contd.)


List of eligible studies (contd.)


Thank You

Questions?

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