THE EFFECT OF AN EXERCISE INTERVENTION FOR THE PREVENTION OF POSTPARTUM DEPRESSION

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Overview of Presentation

- Background on postpartum depression and interventions
- Preliminary data
- Design and results from the Healthy Mom study
Overview of PostPartum Depression

- 10-15% of postpartum women receive a diagnosis of depression during the first 6 months following delivery.
- Symptoms include loss of appetite, intense irritability and anger, overwhelming fatigue, loss of interest in sex, lack of joy in life, feelings of shame, guilt or inadequacy, severe mood swings, difficulty bonding with the baby, withdrawal from family and friends, thoughts of harming themselves or the baby.
Psychosocial Interventions

- Psychosocial interventions are effective for treating postpartum depression
  - Limitation is most women do not seek treatment or do so after there have been negative effects (e.g., poor bonding, relationship problems)
- Medication is another option
  - Many reluctant due to breastfeeding and side effects
- Focus should be on prevention; however, most psychosocial interventions focusing on prevention have not been successful
- Exercise is one approach that has not been extensively explored
Exercise & Major Depression

- Exercise is an efficacious intervention for major depression in adults

- Recent Cochrane review:
  - 25 studies included in the review
  - Large effect of exercise on depressive symptoms among individuals who had a diagnosis of depression relative to no treatment when all 25 trials were included

Exercise & Major Depression

- Blumenthal and colleagues (2007) randomly assigned participants with major depression to one of four conditions:
  - (1) home-based exercise
  - (2) gym-based exercise
  - (3) the antidepressant sertraline
  - (4) a placebo
- The three treatment interventions resulted in a greater reduction of depression compared to the placebo.

Exercise & PostPartum Depression

- **Review Study**
  - 9 studies examined the effect of exercise on postpartum depression
  - 5 out of 9 studies found an effect
- **Many limitations of the studies**
  - Small sample sizes
  - Lack of randomization in some studies
  - Non-diagnostic measure of depression
  - None looked specifically at prevention

Exercise Pilot Study with Pregnant and Postpartum Mothers

- 37 healthy women (19 pregnant and 18 postpartum women)
  - Participants received weekly telephone calls during the first months and biweekly calls during the second and third months
  - Also received mailed materials
  - The telephone calls were designed to motivate the women to exercise
  - The primary outcome variable was physical activity minutes per week at 3 months

Changes in Exercise from Baseline to 3 Months by Group

- Pregnant participants significantly increased, $F(1,13) = 9.96$, $p < .01$
- Postpartum participants significantly increased, $F(1,15) = 6.56$, $p < .05$
Healthy Mom Study

- Purpose was to examine the efficacy of an exercise intervention for the prevention of postpartum depression

- Rationale:
  - Previous studies have been limited by small sample size and non-diagnostic assessment of postpartum depression
  - No study has specifically examined the effect of exercise on preventing postpartum depression

Funded by National Institute of Mental Health R21 MH073820
Participants

- Women who were an average of 5.7 weeks postpartum (n=130) and were not currently depressed but had a history depression or a maternal family history of depression were recruited.

- Baseline characteristics:
  - 82% Caucasian
  - 82% married
  - Average age was 31.5
  - Not the first child for most women (76%)
  - 95% had at least some college education
  - No significant differences between the groups on the demographic variables
Recruitment

- Targeted Email
- Minnesota Parent Recruitment Strategy
- Craig's List
- Other Sources

Percent
Measures

- Primary outcome measure: SCID
- Secondary outcome measures:
  - Edinburgh Postnatal Depression Scale
  - PHQ-9
  - Perceived Stress
Procedures

- Participants were instructed to call the study line once they had their baby.
- Participants were next sent the questionnaires and healthcare provider consent was obtained.
- 130 postpartum participants were randomly assigned to an exercise intervention or a wellness/support contact control condition.
Conditions

- Both conditions lasted six months and received 11 contacts over the telephone.
- The exercise intervention was based on Social Cognitive Theory and The Transtheoretical Model.
- The support arm received information related to health and wellness (e.g., sleep, nutrition, stress) but did not receive information regarding exercise.
Results

- 92% of the exercise participants and 98% of control participants were retained at 6 months.
- No differences between the groups on meeting diagnostic criteria for depression on the SCID at 6 months:
  - 8% (5 participants) of Exercise
  - 8% (5 participants) of Wellness
- No differences on perceived stress (mean was a score of 27 for both arms).
Results: Continuous Depression Measures by Group

*Both measures significant at p < .01.
Discussion

- The rate of depression for both groups was lower than expected for this population of at-risk postpartum women.
- Even though exercise does not appear to be superior to a wellness/support intervention for preventing diagnosed postpartum depression, our findings suggest that exercise may play a role in reducing depressive symptoms.
- Additional research is needed to better understand the role of exercise and support on preventing postpartum depression.
Practical Implications

- The American College of Obstetrics and Gynecologists recommend that pregnant and postpartum women routinely exercise.
- Health care providers could provide exercise prescriptions to women and discuss the benefits of exercise in regard to mood.
- Parent classes, walking groups, and support groups could be provided.