Addressing Maternal Mental Health to Promote Early Childhood Development in Kenya and Tanzania

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Perinatal Depression in LMIC

- Major depression is a leading cause of disability worldwide.
- Perinatal depression is estimated to be two-to-three times higher in low- and middle-income countries versus high-income countries.\(^3\)
- Thrive I evaluation indicated high rates of maternal depression.
Negative Consequences of Perinatal Depression

• Mothers’ health and well-being
  – Birth complications
  – Decreased maternal self-efficacy
  – Breastfeeding problems

• Early childhood development
  – Cognitive and language delays
  – Stunting
  – Increased risk for psychopathology

• Mother-infant interaction

Lancet 2014
The Mothers and Babies Course

- Prevention model based on cognitive behavioral therapy
- **Goal:** Reduce the onset of major depressive episodes by teaching women mood regulation skills and education regarding parenting and child development
- Group-based intervention with follow-up home visits
- Piloted in Kenya and Tanzania
COGNITIVE BEHAVIORAL THEORY

Stressful situation

Thoughts

Depression

Behaviors
MOOD AND YOUR PERSONAL REALITY

MY PERSONAL REALITY

Internal Reality

Thoughts

Mood

External Reality

Activities
The Mothers and Babies Course: Adaptation for Kenya and Tanzania

- Added into the Thrive II ECD project
- MBC delivered in community groups of pregnant and lactating women
- 12 group sessions (biweekly)
- Home visits (monthly)
- Facilitated by counselors, alongside lead mothers who facilitate the ECD
Graduation
Objectives

- To assess the impact of MBC on maternal mental health and ECD behaviors in the context of a community-based ECD project in Tanzania

Outcomes of Interest

- Maternal depression and anxiety (Hopkins Symptoms Checklist)
- Child stimulation behaviors - MICS

Populations

- Pregnant and lactating women and children<2

Ethical Review

- Nat’l Institute of Med. Research
- CUHAS Research & Ethical Comm.
Evaluation Design

- Quasi-experimental: Non-equivalent control groups
- All pregnant and lactating women invited to enroll
Results (1)

Socio-demographics at Baseline
No differences between intervention and comparison areas for:
• Maternal age
• Maternal level of education
• Number of children in household
• Employment status
• Marital status

Depression at Baseline

Anxiety at Baseline

Early Stimulation at Baseline
Results (2)

Change in Prevalence of Depression from Baseline to 6 Month, by area

Adjusted Predicted Probability^ for Depression at 6 Months (p<0.05)

^Controlled for depression at baseline, maternal education, marital status, maternal employment status, maternal health, child age, physical IPV, perceived social support
Change in Anxiety from Baseline to 6 Month Follow-up, by Area

Multivariate model^ showed no statistically significant difference in symptoms of anxiety at 6 month follow-up between intervention and comparison groups (p=0.310).

^Controlled for anxiety at baseline, maternal employment status, maternal health, physical IPV, perceived social support, level of food security
Results (4)

Change in Early Stimulation from Baseline to 6 Month, by Area

Adjusted Predicted Probability^ for Early Stimulation at 6 Months (p<0.05)

^Controlled for early stimulation at baseline, maternal self-efficacy, maternal education, emotional IPV, perceived social support, food security, maternal depression, maternal anxiety, child age
### Lessons Learned: Qualitative Feedback Post-Graduation

#### Mothers

**Positives**
- Learned to recognize mood and ways to manage stress (mood scale)
- Improved communication with husbands
- Recognize others who may suffer from stress or depression

**Challenges**
- MBC was too short
- Limited literacy

#### Case Managers

**Positives**
- Women understood and applied concepts in their own lives.
- CM practiced these skills in their own lives.

**Challenges**
- CM had many groups to manage.
- Limited coordination of content between the ECD and MBC materials.
Conclusions

- At the 6 month follow-up we saw evidence of improvements in symptoms of maternal depression and uptake of early stimulation behaviors.

- These data were supported by the qualitative feedback.

- No difference was detected in symptoms of maternal anxiety.

- More rigorous evaluation of the MBC intervention is needed.
Next Steps: Developing the Integrated Mothers and Babies Course
Strengthening the Capacity of Women Religious (SCORE) ECD Phase Two (2017 - 2021)
Next Steps: Research and Learning

• 12-month data is being collected in Tanzania and Kenya

• Additional evaluation on its implementation by lay health workers in Kenya and Ghana with the Duke Global Health Institute’s Evidence Lab

• **Primary research question:**
  – To what extent does the iMBC/ECD implemented by lay health workers affect **mental health** of mothers of young children in rural Kenya / Ghana?
  – Do lay health workers implement the iMBC/ECD with a sufficient level of **fidelity and quality**?

• **Secondary research questions:**
  – Social-emotional development of children
  – Uptake of ECD behaviors by mothers of young children
  – Couple’s communication/relationship
Thank you

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