



Does maternal depression impact women's empowerment and investments in children?: Evidence from a large randomized control trial

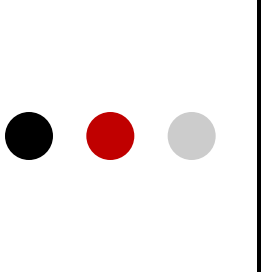
Sonia Bhalotra (University of Essex)

Based on a paper co-authored with Victoria Baranov (Melbourne), Pietro Biroli (Zurich), Joanna Maselko (Duke).



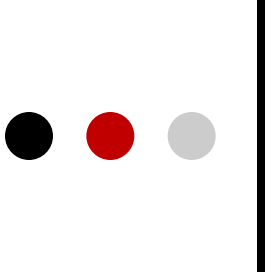
Depression- scale of the problem

- Depression is the leading cause of Years Lived With Disability (WHO).
 - Estimated to affect 13% of the global population and to have cost \$800 billion in 2010.
- The global burden of disease associated with mental health is growing.
 - Mental health influences social and occupational functioning (productivity).
 - It has been associated with crime.
 - It affects physical health- *via* immune responses, adherence to treatment, substance abuse.



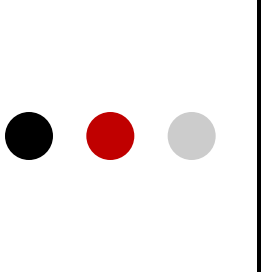
Maternal Depression- common but neglected

- Depression is twice as high among women.
 - Maternal depression or *depression around birth* affects 12-20% women in Europe & America.
 - Prevalence twice as high in poor countries on account of the stresses of poverty & high fertility.
- Often **undiagnosed**, and hence untreated.
- **Limited knowledge of its long term impacts**



Depression- chronicity

- Depression exhibits chronicity
 - More than a quarter of patients experience recurrence.
 - An episode of *maternal* depression raises the chances of experiencing another by 50%
- This makes it important to identify treatments that generate sustained recovery.
 - Antidepressants and cognitive behavioural therapy generate similar short term impacts.
 - Antidepressants encourage relapse
 - CBT involves learning new skills and addressing information-processing biases so potentially has **persistent** protective benefits.



Depression: decision-making and negotiation

- *‘‘As thoughts and feelings alternate between despair and rapid-fire obsessiveness, women with post-partum begin to lose focus, along with the ability to successfully advocate for themselves.’’*
- Thus depression may bias decision-making and weaken an individual’s bargaining power.
- Limited evidence.
- Almost no evidence of **lasting** impacts.



What We Do and Find

- We investigate how (treating) maternal depression influences women's decision-making
- We find that a cognitive behavioural therapy initiated in pregnancy and ending ten months after birth has fairly large positive impacts **seven years later**.
- Women who had the treatment have **greater control over household spending** and they **spend more money and time on their children** [“investments”].



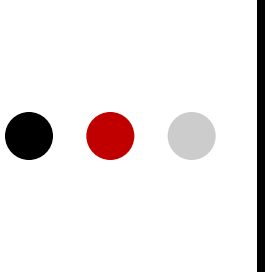
Research Challenge- identifying causal effects

- A common factor like poverty could cause depression and also cause limited control over income and lower money and time spent with children.
- To isolate **causal** effects of depression on these outcomes, we need to use variation in depression that is not related to the woman's environment.
- We need to identify causal effects (rather than raw associations) if we want to design policies that change the outcomes.



How the identification challenge was addressed

- A cluster-randomized control trial was implemented in which a **random** half of participants received therapy (CBT) for perinatal depression.
 - All pregnant women in 40 clusters (communities) in Pakistan were clinically assessed for depression.
 - All depressed women were recruited into the trial & 20 clusters received the treatment.
- Delivered by local health workers: low cost, scalable intervention



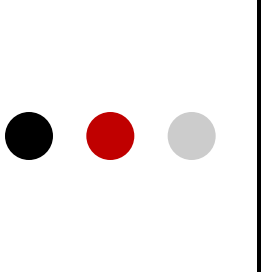
Follow-up surveys and research strategy

- At baseline, 903 women (24% of pregnant women assessed) were clinically depressed.
- Follow up surveys were conducted when the child was 6 months, 1 year and 7 years.
 - Attrition was not differential by treatment arm.
 - We took extensive measures of the mother's mental health status, her financial status, her investments in children, and their development.
- Given randomization into treatment, we can **obtain causal effects comparing outcomes in the treatment vs control arms of the trial.**



Intervention- The Thinking Healthy Programme

- THP is the largest psychotherapy trial in the world to date. Designed by Rahman et al. Adopted by the WHO in 2015.
 - Delivered by community health workers: a low cost, scaleable intervention
- CBT focused on identifying and modifying cognitive distortions common in depression
 - Every woman received 16 home visits spread across about a year.
 - All women received routine reproductive and child health information. Women in the treatment arm received the CBT in addition.



CBT had persistent impacts on depression

- Women in the treated arm had better mental health than women in the control arm at the 1 year mark soon after the end of the therapy, and also at the 7 year mark.
 - At the start of the trial, in pregnancy, all women were depressed.
 - The share fell sharply from 100% to 25% in the treated arm, and persisted at this level.
 - In the control arm, spontaneous recovery led to the share falling to 50% by 1 year, and 30% by 7 years.
- We conclude that CBT has persistent impacts.



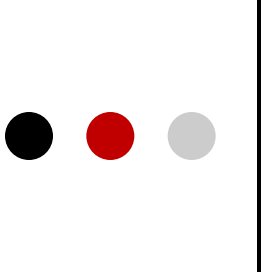
CBT had persistent impacts on woman and child outcomes

- **Women's financial empowerment** increased by 0.3 SD; driven by control of spending increasing 20%
- **Parental investments** increased by 0.2 to 0.3 SD.
 - Monetary investments: learning materials, physical environment, school quality.
 - Time investments: family companionship, help with studies, integration, enrichment.
 - Parenting style: encouragement of maturity, responsiveness, emotional climate, harshness and consistency [only for girls].
- No robust impacts on fertility, income or indicators of child development at age 7.



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Long run benefits of treating maternal depression favoured girls

- Women with daughters have more limited control over household spending and that their children receive lower investments.
 - The intervention redresses this imbalance.
- Our findings are consistent with previous research (some of which is on richer countries) showing that
 - Men and women have different preferences. So they allocate spending differently (political or home).
 - Money in the hands of women is more likely to translate into spending on children
 - Men may favour sons. Women more gender-neutral



Conclusions

- Maternal depression is more prevalent than is recognized.
- Often perceived as natural and transient.
- So not consistently measured, monitored or treated.

- We provide the first causal evidence that, left untreated, maternal depression can have persistent impacts on women's empowerment and on their children.

- Our evidence shows that a one-off CBT intervention initiated in pregnancy and followed through the first postpartum year can have persistent beneficial impacts.