

Stressed and Depressed:

Effects of Financial Stress and Maternal Depression on Child Development

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Introduction

- Nearly **1 in 10** women in Colorado experience post partum depression (PPD)¹.
- Approximately **75%** of new mothers go untreated for PPD which can have impacts on child development.
- Low social economic status (SES) has also been linked to poor child development, but low SES does not translate to financial stress (FS)².
- The **perception of being poor** has more impact on child development than the actual experience of being poor³.
- Theories on the impact of stress hypothesize that financial stress contributes to depression, and in turn, negative impacts on child development².
- More work is needed to understand the independent and additive effect of maternal depression and financial stress on child development.

Questions

- Does maternal depression without financial stress during early infancy relate to child development at 12-months?
- Does financial stress without depression during early infancy relate to child development at 12 months?
- Is there an **additive** effect of both depression and financial stress on development at 12 months?

Methods

- Patient information and screeners were abstracted from electronic medical records.
- Mothers of children 0-4 months were screened for depression and financial stress between July to December 2017. Child development was assessed at 12-months.
- Financial stress was evaluated with psychosocial screener questions 3.

3. In the last 12 months, did you ever feel stressed about making ends meet?
Please circle all that apply: rent/mortgage, formula, diapers, childcare, gas/transportation, paying bills, other _____

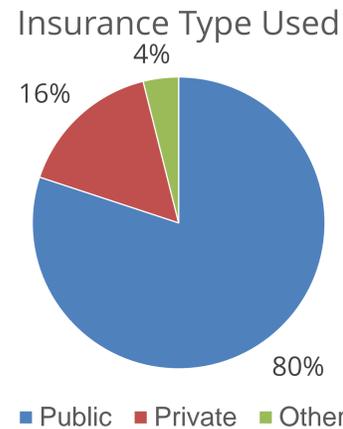
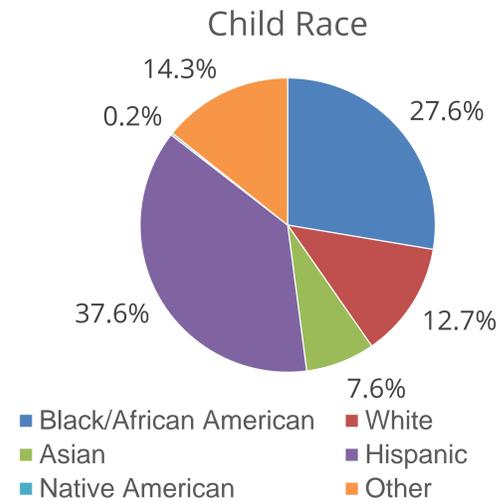
- Maternal depression was evaluated with the Edinburgh Postnatal Depression Scale (scores ≥ 10 indicate positive results for depressive symptoms)⁴.
- 12-month Ages and Stages Questionnaire used for infant development (delayed vs. not delayed)⁵.

1. SCORE AND TRANSFER TOTALS TO CHART BELOW: See ASQ-3 User's Guide for details, including how to adjust scores if item responses are missing. Score each item (YES = 10, SOMETIMES = 5, NOT YET = 0). Add item scores, and record each area total. In the chart below, transfer the total scores, and fill in the circles corresponding with the total scores.

| Area | Cutoff | Total Score | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
|-----------------|--------|-------------|---|---|----|----|----|----|----|----|----|----|----|----|----|
| Communication | 15.64 | | | | | | | | | | | | | | |
| Gross Motor | 21.49 | | | | | | | | | | | | | | |
| Fine Motor | 34.50 | | | | | | | | | | | | | | |
| Problem Solving | 27.32 | | | | | | | | | | | | | | |
| Personal Social | 21.73 | | | | | | | | | | | | | | |

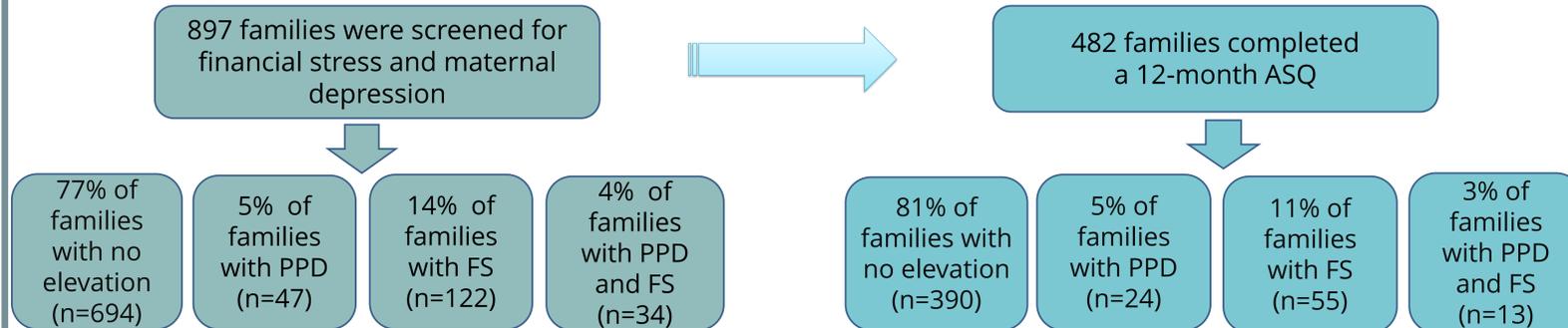
Results

1. Demographics (n=897)



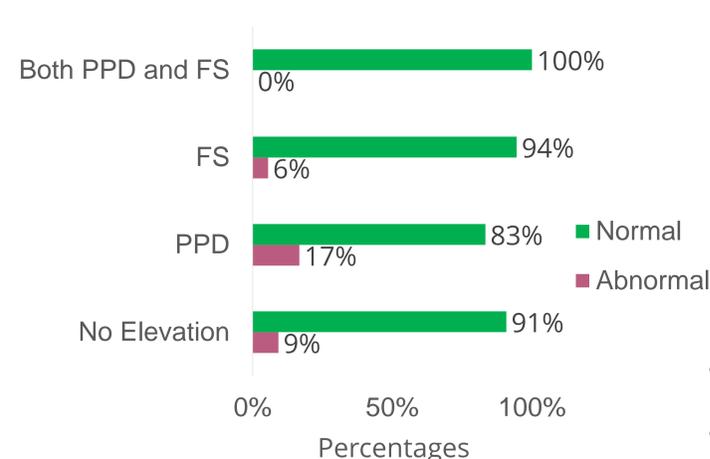
- The sample was racially diverse and was largely publicly insured.
- 51% male and 49% female.
- Public insurances include CHP+ and Medicaid.
- Other includes international and self-pay.

2. Screening Information

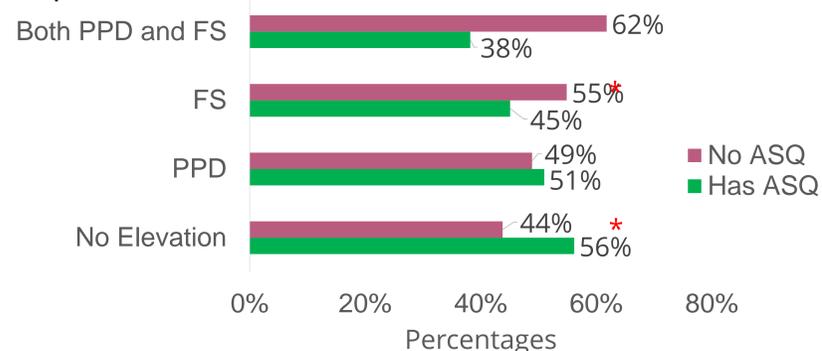


- The majority of families (77%) did not report experiencing depression or financial stress. Financial stress was endorsed by 14% of families while 5% of families reported elevated postpartum depression screenings with no financial stress.
- 54% of families in the original sample completed ASQs. Most of these families had no depression or financial stress (81%), and only 3% of the families endorsed both financial stress and maternal depression.

3. Normal and Abnormal ASQs by Screening Group



4. Attrition at 12-Month Well Visit



- Chi-square analysis indicated that there were not enough participants in each cell to draw conclusions.

- Given the level of attrition, post hoc analyses examined if certain groups were less likely to be screened at 12-months.
- Adjusted residuals showed that families with no risk were more likely to be screened (n=390, n=304) whereas families with FS were less likely to be screened (n=55, n=67) ($\chi^2 = 8.786$, $df=3$, $p = 0.032$, n=897) at 12-months.

Discussion

- Due to the small number of children in groups with a 12-month ASQ and elevated PPD, elevated financial stress, or both, statistical analysis **could not be conducted** to examine the relation between depression, financial stress, and their additive effects on development.
- Families with **FS were less likely** to be screened with a 12-month ASQ.
- Families with **no risk factors were more** likely to be screened at 12-month well child visit.
- More interventions and outreach to families within the community could be beneficial to ensure on time attendance at well child visits.

Limitations

- Appointment dates within 1 year, 30 day of children's birthday were analyzed. Some children might have been screened at a slightly older age (e.g. 13-months).
- The causes of attrition at 12-month well child checks can be due to multiple factors, not just the negatives, which were not examined.

Future Directions

- Using a larger sample to help determine group differences to better understand the relation between depression, financial stress, and child development.
- Examining reasons for attrition to better understand if certain families may benefit from interventions to help them attend their 12-month well child checks.
- Engaging in additional outreach and education about the importance of well child care visits to communities.

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