

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 _____

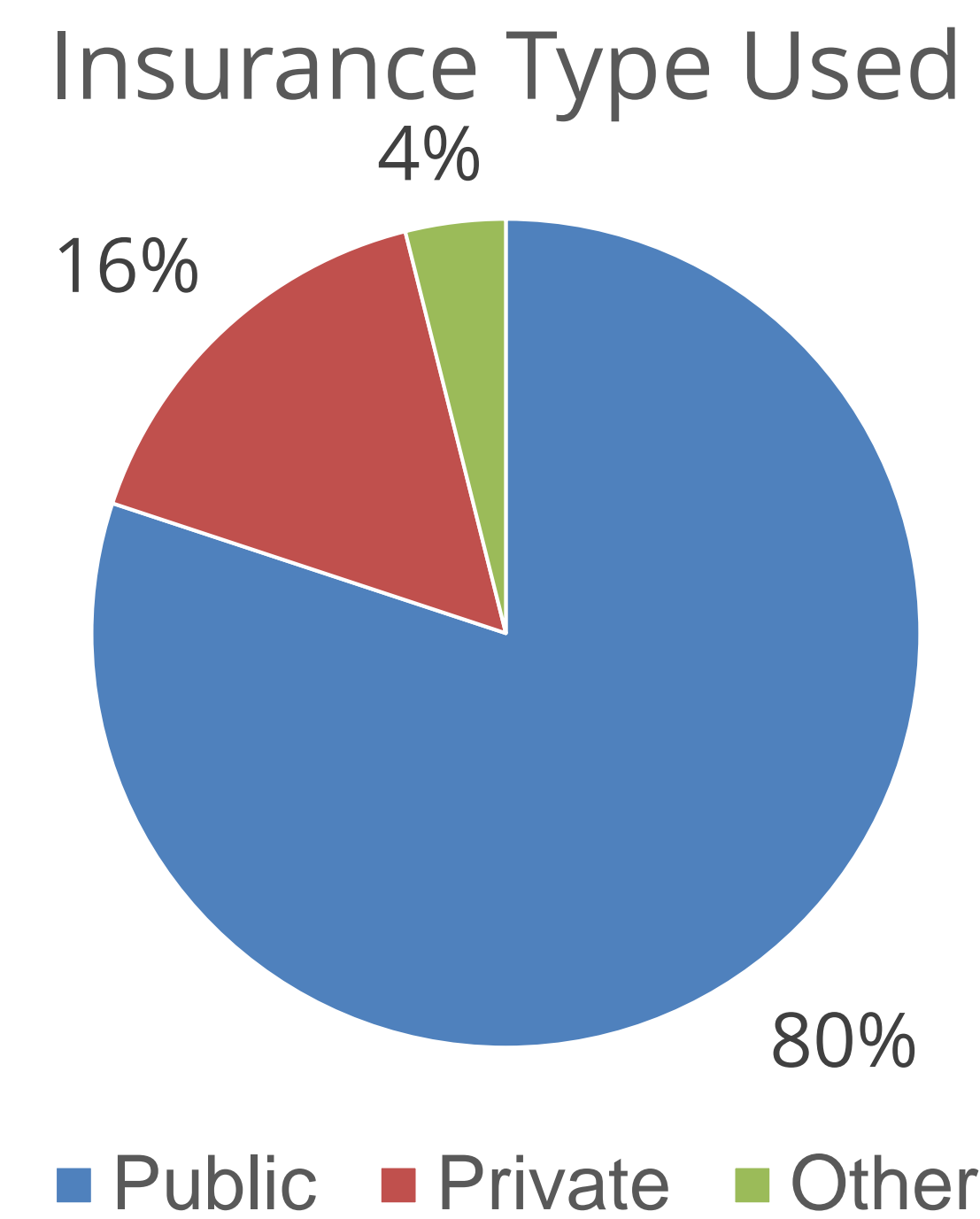
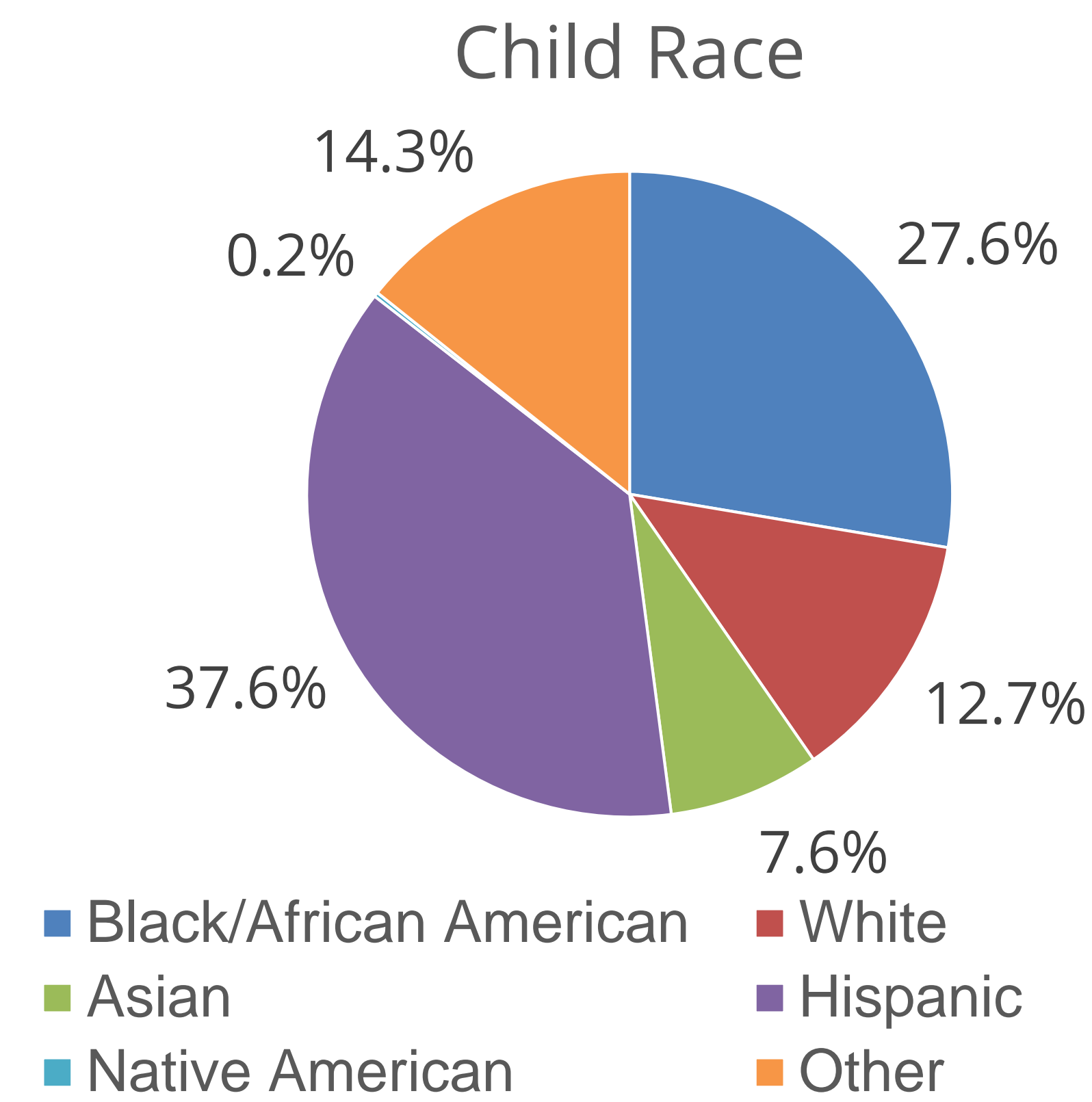
- Maternal depression was evaluated with the Edinburgh Postnatal Depression Scale (scores ≥ 10 indicate positive results for depressive symptoms)⁴.
- 12-month Ages and Stages Questionnaire used for infant development (delayed vs. not delayed)⁵.

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		●	●	●	●	●	●	●	●	●	●	●	●	●

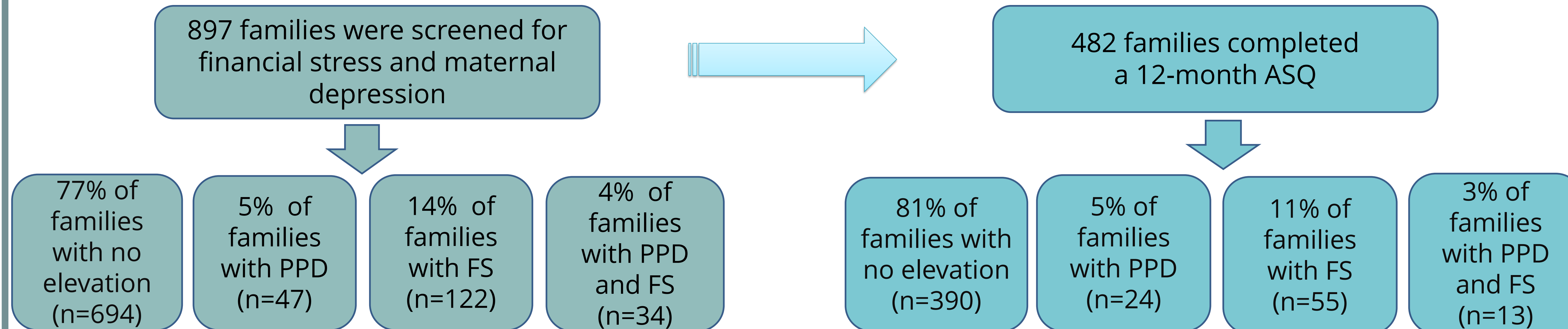
Results

1. Demographics (n=897)



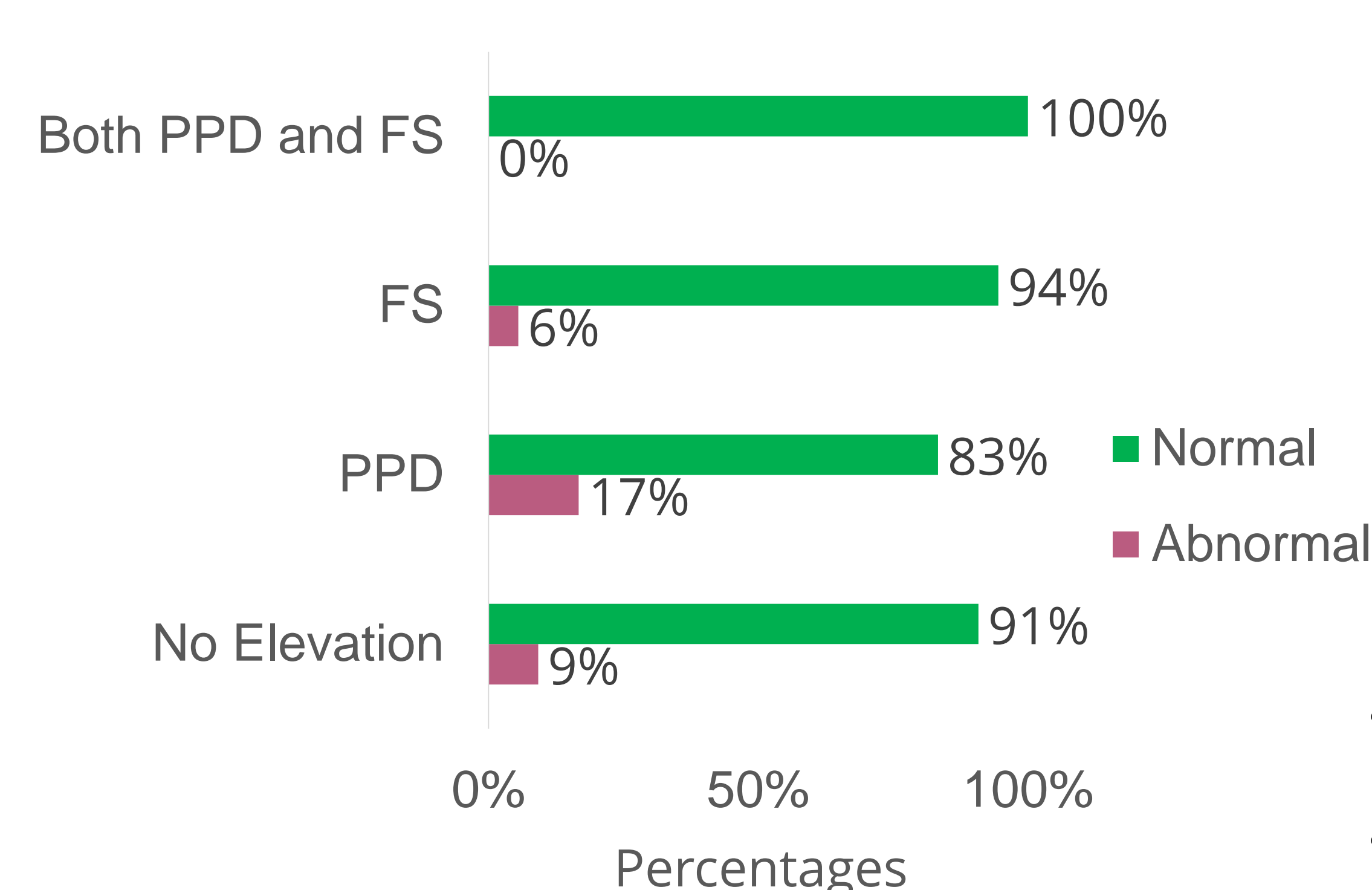
- The sample was racially diverse and was largely publicly insured.
- 51% male and 49% female.
- Public insurances include CHP+ and Medicaid.
- Other includes international and self-pay.

2. Screening Information

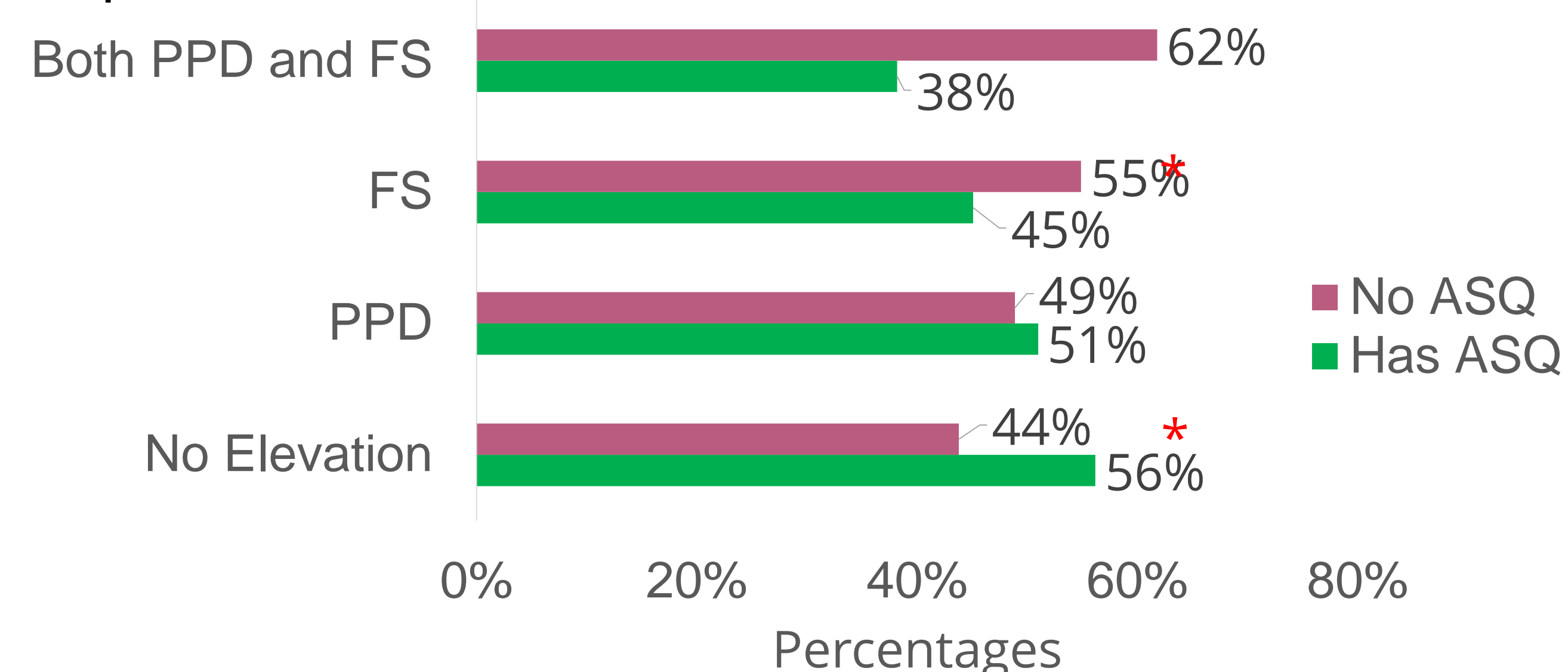


- The majority of families (77%) did not report experiencing depression or financial stress. Financial stress was endorsed by 14% of families while 5% of families reported elevated postpartum depression screenings with no financial stress.
- 54% of families in the original sample completed ASQs. Most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

Acknowledgements

Thank you **Dr. Catherine Wolcott** and **Dr. Ayelet Talmi** for the opportunity, mentorship, and guidance.

Thank you Shengh Xiong and Ryan Asherin for helping with the data. Thank you to the Project CLIMB team for an educational and inclusive experience.

Thank you Dr. Douglas Novins (Chair of PMHI), Dr. Dominic Martinez (Dir. Office of Inclusion and Outreach), and CCTSI for sponsoring PURPLE.

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