Examining Financial Stress Among Mothers in the Baby's First Years Study

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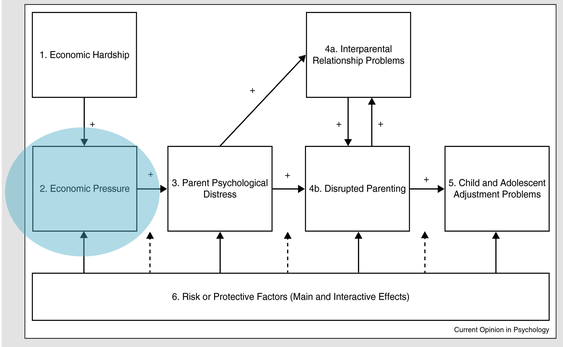
Abstract

Decades of research have shown that persistent poverty has detrimental effects on children's social and emotional development[1]. The Family Stress Model[2] posits that financial hardship may lead to economic stress, which in turn can lead to parent psychological distress and disrupted parenting, ultimately influencing child and adolescent adjustment problems. To better understand how a poverty reduction intervention may influence these developmental pathways, Baby's First Years (BFY)[3] –a randomized controlled longitudinal study—is investigating the causal impacts of unconditional cash gifts to low-income U.S. families on children's brain development over their first five years of life. The current study utilized publicly available data from the BFY study and multilevel modeling techniques to examine if mothers who were randomly assigned to the high cash group ($333/month) in the BFY study demonstrated alleviated feelings of economic stress relative to mothers assigned to the low cash group ($20/month). Results revealed that, while holding income constant, the experimental cash groups were not significantly associated with perceived levels of economic stress. However, while holding the individual constant, household income was negatively associated with economic stress, In essence, household income, but not the BFY cash payments, are associated with decreased feelings of economic stress over time for families in this study.

Background & Study Aims

Decades of research have shown that persistent poverty has detrimental effects on children's social and emotion development[1]. The Family Stress Model is a framework for understanding how the link between socioeconomic disadvantage and child outcomes is mediated by family stress[2]. There is strong evidence to suggest a pathway exists between ***economic stress*** to child and adolescent ***adjustment problems***, via parent psychological distress and disrupted parenting[2].



Aim: Examine the effect of cash payments on feelings of economic stress among mothers in the Baby's First Years Study

Hypothesis: Mothers in the high cash group will feel less worried about finances that mothers in the low cash group

Data Source

Who: 1,000 mothers of infants with incomes below the federal poverty line
What: Mothers receive a monthly unconditional cash gift of either $333/month or $20/month for the first 52 months of their child's life
Where: New York City, New Orleans, Twin Cities, Omaha metropolitan area
When: Recruitment of study participants began in May 2018 and ended in June 2019. Quantitative data is being collected just after birth and when the child reaches 12, 24, 36, and 48 months of age.
Why: Examine the causal impact of monthly, unconditional cash gifts to low-income mothers on their child's cognitive, socio-emotional, and brain development

Summary Statistics of Sample

Variable	*n*	*M*	*SD*	*ICC*
Observation Level				
Economic Stress (standardized)	2724	0	0.99	0.394
Baby's age (months)	2802	12	9.80	0.00
Household Income (person-centered, USD)	2730	0.00	17,015.05	0.435
Household Income (person-centered, z)	2730	0.00	1.00	0.435
Person Level	*n (%)*	*M*	*SD*	
Mother's age at baseline	934	27.03	5.79	
Mother's age at baseline (z)	934	0.00	1.00	
Mother's Depression Level at Baseline (z)	934	-0.02	0.98	
Number of children in the household (child)	934	2.75	1.39	
Mother's Education Level (years)	934	11.93	2.85	
Mother will have help with child care				
Yes	555 (59.4%)			
No	379 (40.6%)			
Experimental Group				
High cash group	379 (59.4%)			
Low cash group	555 (40.6%)			

Note. M and *SD* are used to represent mean and standard deviation, respectively. ICC are used to represent intraclass correlations. [1.] ICC for uncentered version of the variable.

Regression Measures

Measured at Baseline, T1 & T2

- ***Outcome:*** Economic Stress
  - Assessed on a six-point scale: (1) All the time, (2) Very frequently, (3) Occasionally, (4) Rarely, (5) Very rarely, (6) Never
- ***Covariates***
  - Baby's Age
  - Household Income – **excluding** experimental group cash

Measured at Baseline Only

- ***Focal Predictor:*** Experimental Group
  - high cash group ($333/month) or low cash group ($20/month)
- ***Covariates***
  - Mother's age
  - Mother's depression level: Center for Epidemiological Studies Depression Scale (CES-D)
  - Mother's education level
  - Number of children in the household
  - Childcare support: yes/no

Analysis

- A multilevel linear model using restricted maximum likelihood was run to examine whether ***experimental group*** was associated with ***financial stress*** over time.
- A cross-level interaction between experimental group and age was then run to understand whether one's ***experimental group*** impacted ***financial stress*** differently **across time.**
- Covariates included household income, mother's age, depression level, and education level, number of children in the household, and childcare support.

Regression Results

	Dependent Variable: Economic Stress (*Expense Worry*, standardized)	
	Model 1	Model 2
Observation-Level		
Household Income (person-centered, z)	-0.034* (0.015)	-0.035* (0.015)
Baby's Age (Months)	-0.000 (.002)	-0.000 (.002)
Person-Level		
Mean Household Income (z)	-0.055* (0.024)	-0.054* (0.024)
Experimental Group (High Cash)	0.048 (.049)	0.032 (.059)
Mean Maternal Age (z)	0.029*** (.004)	0.029*** (.004)
Mother's depression level at baseline (z)	0.203*** (.024)	0.202*** (.024)
Number of children in the household (child)	-0.040* (0.018)	-0.040* (0.018)
Mother will have help with child care (no)	-0.140** (0.049)	-0.140** (0.049)
Baby's Age (Months): Experimental Group (High Cash)		.002 (.003)
Constant	-0.636*** (0.120)	-0.629*** (0.120)
Observations	2,724	2,724
Variance Component		
ID	0.323	0.323
Residual	0.550	0.549
Baby's Age	0.000**	0.000
$R^2_{LMM(m)}$	0.0751	0.0752

Note:*p<.05, **p<.01, ***p<.001

Results Summary

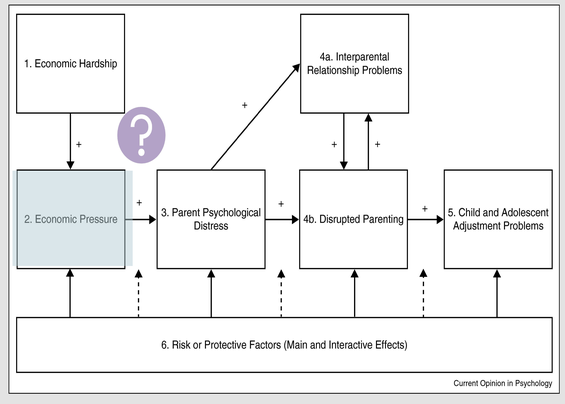
- The experimental group was **not** significantly associated with perceived levels of economic stress (β_y =0.048, p=0.321).
- The interaction between age and experimental group was **not** significant (β_y=002,p=.625).
- Household income has a **significant** negative effect on economic stress (β=-.034, p<.05).

Conclusion

- This analysis suggests that one's experimental group status has very little effect on levels of economic stress over time, but one's overall income, maternal age, and depression levels do.
- Cash payments, even in the high cash group, do not alleviate feelings of economic stress for families in this study.

Future Directions

Future research should examine if feelings of economic stress among mothers in this study affects psychological distress and disrupted parenting, as predicted by the Family Stress Model.



References

1. McLoyd V. C. (1998). Socioeconomic disadvantage and child development. *The American Psychologist*, *53*(2), 185–204.
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