



# **The Influences of Fragile Family Caregiver's Aggravation in Parenting on Social Behavior and Academic Performance**

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# Research Questions

1. How does caregiver's (mother/father in a fragile family) aggravation in parenting affect the focal child's academic performance?
2. How does caregiver's (mother/father in a fragile family) aggravation in parenting affect the focal child's delinquent behaviors?
3. Does the regression models from general linear modeling predict the child's academic/delinquent performances better than the machine learning regression models?





# Fragile Families

## Definition

- ✓ Fragile families includes the unmarried or romantically unstable parents and their child(ren).

## Why important?

- ✓ The aggravation in parenting are one of the big issue in the fragile families.
- ✓ There is a lack of such studies on fragile families because most studies have focused more on general parents and their children



# Data

## **Fragile Families and Child Wellbeing study**

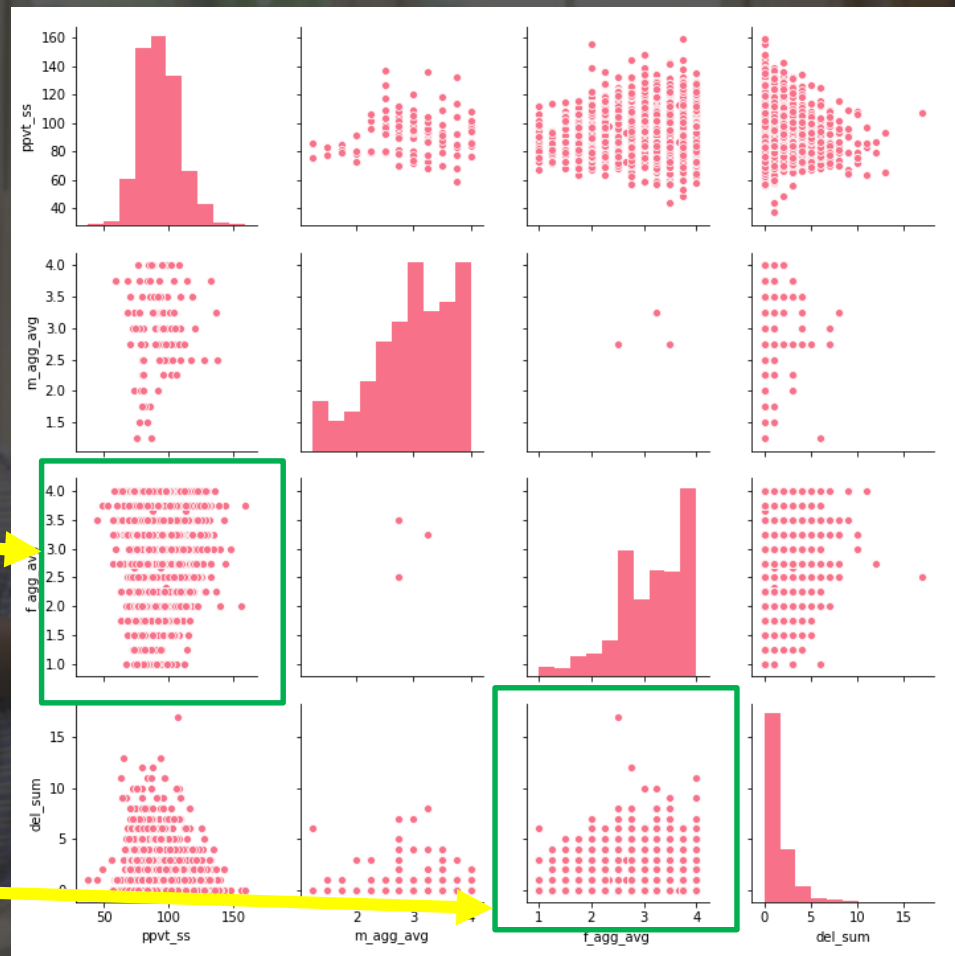
- ✓ The study had been conducted six waves of data collecting, spanning from 1998 to 2017.
- ✓ The dataset is consist of 4,989 observations and 16,993 variables.
- ✓ We focused on Year 9 (2009).

## **Measures**

- ✓ Academic Performance
- ✓ Delinquent Behavior
- ✓ Aggravation in Parenting



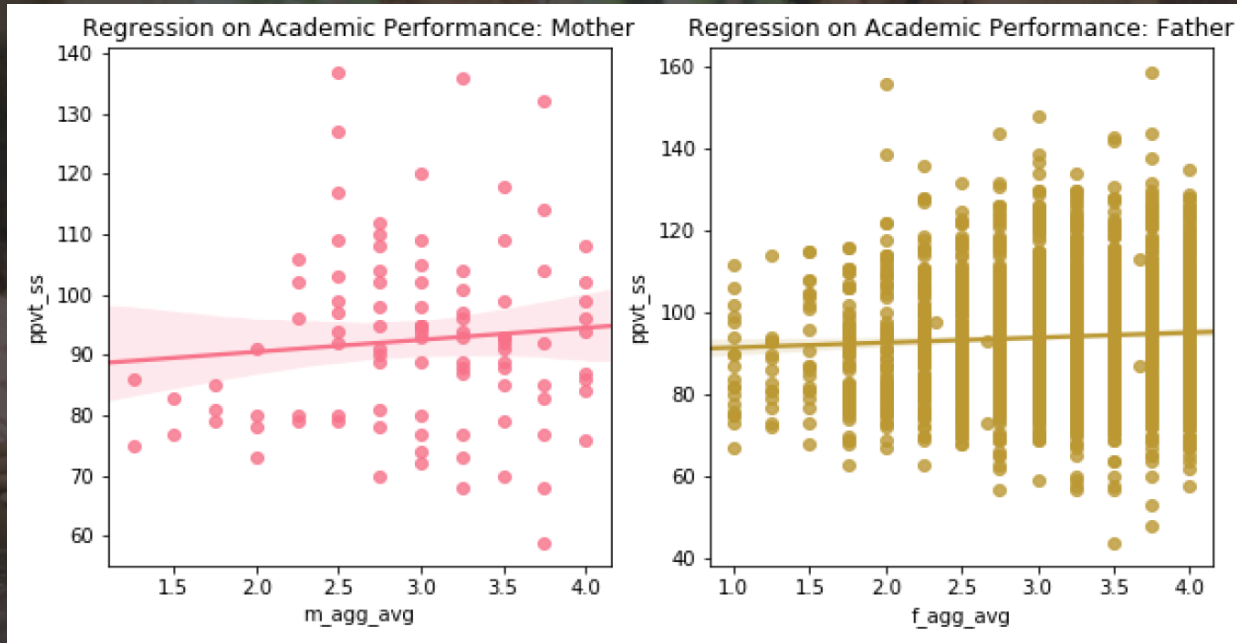
# Correlations





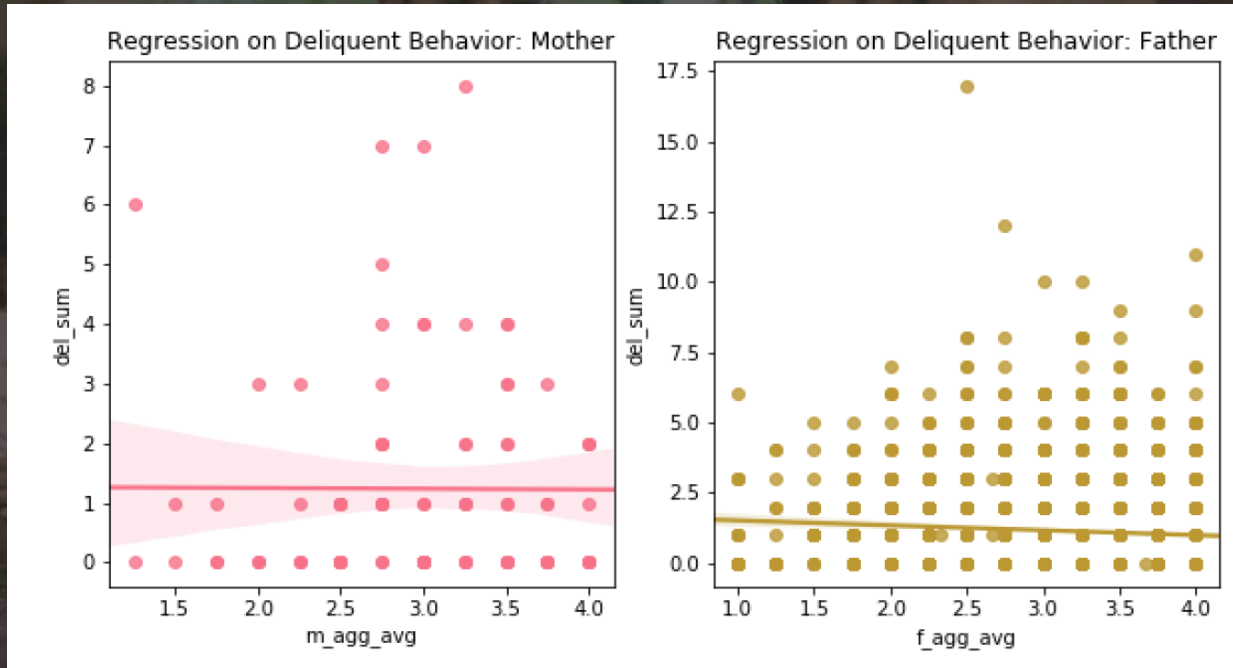
# Regressions

1. How does caregiver's (mother/father in a fragile family) aggravation in parenting affect the focal child's academic performance?



# Regressions

2. How does caregiver's (mother/father in a fragile family) aggravation in parenting affect the focal child's delinquent behaviors?



# OLS Regression vs Machine Learning

3. Does the regression models from general linear modeling predict the child's academic/delinquent performances better than the machine learning regression models?

	OLS Regression		Machine Learning
Academic Perf Mother	Coef = 1.9897	<	Coef = 3.0007
	RMSE = 13.1679	≈	RMSE = 14.2050
Academic Perf Father	Coef = 1.2169	≈	Coef = 1.2111
	RMSE = 37.9458	>	RMSE = 15.2732
Delinquent Beh Mother	Coef = -0.0124	<	Coef = -0.0266
	RMSE = -0.0813	≈	RMSE = 1.3698
Academic Beh Father	Coef = -0.1744	≈	Coef = -0.1655
	RMSE = 5.3881	>	RMSE = 1.5400





Thank you for listening!

