

Happily ever after? Domestic violence, women's empowerment, and stress after CCTs.

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Relevance and Motivation

- 35% of women in the world are victims of physical and sexual violence (WHO, 2013)
- Costs associated with domestic violence:
 - physical and psychological health treatments, addiction, labor market costs, children with lbw.
- This paper studies the collateral effects of CCTs (a popular policy tool to reduce poverty) on domestic violence and its possible channels.
- In general: mothers receive the money
 1. Does they make better decisions in terms of investing the money?
[Akresh et al. \(2015\)](#) and [Benhassine et al. \(2014\)](#)
 2. Could this increase gender equality, female empowerment?
Therefore, having an effect over domestic violence?

Question and contribution

- We use exogenous variation in the (unanticipated) timing of payments that affect domestic violence at the municipal level
 - Partner, children, elderly, other members.
- This paper tests 4 possible channels :
 1. Female empowerment
 2. Divorce
 3. Labor market participation
 4. Scarcity and stress
- This study has external validity for the Colombian population, this is not achieved with an experiment.

Two possible theories: Domestic violence

- **Reduction:** Power games within the households, where financial resources empower women and reduce the violence against them
 - (Aizer, 2007; Farmer and Thiefenthaler, 1997 and Tauchen et al. 2001)
- **Increase:** “Men backlash” women’s higher resources may threaten men’s power and increase violence
 - (Eswaran y Malhotra (2011), Tauchen et al. (1991), Bloch y Rao (2002) and Bobonis et al. (2013))

Empirical Literature: Domestic violence

- **Reduction** : Perova (2010), Haushofer y Shapiro (2013) and Hidrobo et al. (2016 RCT Bono de Desarrollo Humano), 6-7pp
- **Mixed effects:**
 - Angelucci (2008): Oportunidades reduces domestic violence associated with alcohol in a 37% , but increases in households where men have low education, married to younger women and when women are entitled to receive a high transfer.
 - Bobonis et al. (2013): Oportunidades reduces physical abuse by 33% but emotional violence rises by 60%
 - Hidrobo and Fernald (2013) Reduces emotional violence for women with more than primary education, but increases emotional violence for women with primary education.
- Findings vary according to household member characteristics ...

Background: *Familias en Acción*

- Colombian government launched Familias en Acción (FeA) in 2001
 - First Phase :2001-2006,
 - 665,316 beneficiary families, 848 municipalities.
 - Mainly rural with population less than 100,000
 - Today 2.5 million families are covered nationwide and the program costs 0.3%-0.4% of GDP.
 - Aims at: increasing school attendance (7-18) and improving nutrition and health outcomes (<7).
 - Conditionality of attendance to 80% classes and medical checkups.
- Payment process:
 - supposed to be every two months, but the payments have time and space variation
 - Payment's dates are exogenous to municipality and household's characteristics.

Familias en Acción payments

Monthly proportion of Municipalities that received the FeA payments. 2007-2010

	2007	2008	2009	2010
January	N.A	1.0%	99.9%	24.0%
February	N.A	99.9%	4.0%	100.0%
March	N.A	12.3%	3.4%	1.9%
April	N.A	30.5%	99.9%	99.9%
May	57.5%	100.0%	91.4%	3.7%
June	0.0%	0.1%	100.0%	100.0%
July	95.4%	100.0%	6.4%	100.0%
August	33.3%	0.2%	99.9%	2.1%
September	98.4%	100.0%	1.6%	100.0%
October	14.9%	3.7%	100.0%	1.5%
November	78.8%	100.0%	100.0%	99.9%
December	96.3%	19.6%	2.4%	99.9%
Total	59.3%	47.3%	59.1%	61.1%

Data

1. Forensic Data

- Domestic violence, suicides, sexual violence, homicides, traffic accidents and intrapersonal violence.
 - domestic violence to: intimate partner , towards the minors, elders and other family members.
 - and towards the elders.

2. System of Information of FeA

- payments dates and family's municipality of residence.

3. FeA panel data survey (quasi-experimental evaluation)

- Baseline: June -October 2002
- First follow-up: July -December 2003
- Questions regarding who in the household is responsible for taking certain decisions:
 - Decisions: take children to doctor when sick, take children to school, buy children's cloths, food spending, extra spending.
 - Answers: Father decides alone, Mother decides alone, Both decide, other members in the household decide

Empirical strategy: CCT and Domestic Violence

- Identification strategy based on dates of payment.
 - payment is not delivered on the same month in all the country and in the same municipality the payment is not delivered every two months.
- Unbalanced panel data at the municipality level

$$DomesticViol_{i,m,t} = \beta_0 + \beta_1 Pay_{i,m,t} + \gamma X_{i,m,t} + \vartheta_i + \sigma_m + \tau_t + \theta_{i,m,t} + \epsilon_{i,m,t}$$

- $Domestic\ Viol_{i,m,t}$ domestic violence rate per 10,000 people at muni i , month m , and year t .
- $P_{i,m,t}$ dummy for payment delivery in muni i , month m , and year t .
- $X_{i,m,t}$ municipal controls (poverty, inequality, taxes, quality of education, investments in education and health).
- $\theta_{i,m,t}$ Municipality time trend

Average impacts of Domestic Violence

Familias en Acción payment's average impact on the domestic violence rate

Dependent variable: Domestic violence rate per 10,000 people.

	(1)	(2)	(3)
FeA Payment Month	-0.0843*** (0.0203)	-0.0647*** (0.0201)	-0.0644*** (0.0201)
Fixed effects			
Municipalities	No	Yes	Yes
Year	No	Yes	Yes
Month	No	Yes	Yes
Time tendency	No	Yes	Yes
Controls	No	No	Yes
Observations	35,872	35,872	35,872
R-squared	0.000	0.002	0.006
Number of municipalities		865	865

Note: The observation unit is municipality-month. Standard Errors, clustered at the municipality level, between parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Source: SIFA, Forensis y panel CEDE. Controls: Taxes per capita, Education investment per capita, justice investment per capita, average score in Saber 11, Offensive actions rate, interpersonal violence rate and homicides rate. All rates are per 10,000 people. Taxes per capita are in thousands of pesos (CPI 2008)

Who suffers from Domestic Violence?

FeA's transferences impact on victims of domestic violence.

	(1) Intimate partner violence	(2) Violence towards the minors	(3) Violence towards the elders	(4) Violence towards other family members
FeA Payment Month	-0.0578*** (0.0202)	0.00636 (0.0193)	-0.00213 (0.00479)	-0.0201 (0.0282)
Observations	21,840	21,840	21,840	21,840
Mean of dependent variable	1.0874	0.404	0.0304	0.406

Note: The observation unit is municipality-month. Standard Errors, clustered at the municipality level, between parentheses. *** p<0.01, ** p<0.05, * p<0.1. Source: SIFA, Forensis y panel CEDE. All rates are per 10,000 people. Taxes per capita are in thousands of pesos (CPI 2008). All the regressions contain municipalities, year and month fixed effects. Additionally, all the models have a municipality time tendency. All regressions contain controls: Taxes per capita, Education investment per capita, justice investment per capita, average score in Saber 11, Offensive actions rate, interpersonal violence rate and homicides rate.

Robustness checks with other crimes

FeA's transferences impact on other types of violence rates

Dependent variable: violence rates per 10,000 people.

	(1) Interpersonal Violence	(2) Homicides rate	(3) Sexual Violence	(4) Transit accidents	(5) Suicides
FeA Payment Month	0.000614 (0.0287)	0.00190 (0.0462)	0.0360 (0.0737)	0.00748 (0.00568)	-0.00365 (0.0115)
Observations	35,872	35,872	35,872	35,872	35,872
Mean of dependent variable	1.133	0.2914	0.3512	0.1063	0.0536

Note: The observation unit is municipality-month. Standard Errors, clustered at the municipality level, between parentheses. *** p<0.01, ** p<0.05, * p<0.1. Source: SIFA, Forensis y panel CEDE. All rates are per 10,000 people. Taxes per capita are in thousands of pesos (CPI 2008). All the regressions contain municipalities, year and month fixed effects. Additionally, all the models have a municipality time tendency. All regressions contain controls: Taxes per capita, Education investment per capita, justice investment per capita, average score in Saber 11, Offensive actions rate, interpersonal violence rate and homicides rate.

Possible Channels: Related Literature

- Conditional Cash Transfers (CCT) programs could decrease domestic violence:
 1. Female empowerment due to:
 - Increase in women's relative income (15-20% min. wage)
 - Improvement of women's social networks and knowledge
 2. Increase of divorces (Brassiolo, 2011)
 3. Increase labor participation (Bowlus, 2005)
 4. Scarcity/ shortage of resources
 - Attanasio et al. (2006) argues that FeA increases food consumption by about 15% in rural areas.
 - Reduction in crime rates after the FeA payment is received (Camacho et al. 2014)

1. Female Empowerment

1. Households Decisions

- Seemingly Unrelated Regressions (SUR) for:
- j equations: doctor decision, school decision, cloth decision, food decision and extra spending decision.
- i households

$$Father_{decides_{ij}} = \beta_0 + \beta_1 FeA_{i,j} + \beta_2 Post_{i,j} + \beta_3 Post_{i,j} * FeA_{i,j} + \sigma Pscore_{i,j} + \gamma X_{i,j} + \vartheta_i + \epsilon_{i,j}$$

- dummy equal to 1 if the family received the payment or a variable equal to the amount of the subsidy
- dummy equal to 1 if the period is the first follow-up
- households' characteristics such as the number of children and the age, education and work of the mother and the head of the household.
- mothers fixed effect

1. Female empowerment: decision making

The effect of receiving the payment on women empowerment

Dependent variable: Father decides

	(1) Doctor decision	(2) School decision	(3) Cloth decision	(4) Food decision	(5) Extra spending decision
Received FeA* First Follow-up dummy	0.02** (0.0099)	0.043*** (0.0127)	-0.006 (0.017)	-0.003 (0.0184)	0.012 (0.0184)
Observations	8,152	8,152	8,152	8,152	8,152

The effect of the amount of the subsidy on women empowerment

	(1) Doctor decision	(2) School decision	(3) Cloth decision	(4) Food decision	(5) Extra spending decision
CCT subsidy* First Follow-up dummy	0.028* (0.0156)	0.031* (0.0184)	-0.015 (0.0241)	0.003 (0.0269)	-0.002 (0.0283)
Observations	8,151	8,151	8,151	8,151	8,151
Mean of CCT subsidy	0.30599				

Note: Robust Standard Errors between parentheses. *** p<0.01, ** p<0.05, * p<0.1. We control for the mother and the head of the household's age, education, and if they work or not. Source: FeA survey

2. Labor participation

$$works_{i,j} = \beta_0 + \beta_1 FeA_{i,j} + \beta_2 Post_{i,j} + \beta_3 Post_{i,j} * FeA_{i,j} + \sigma Pscore_{i,j} + \gamma X_{i,j} + \vartheta_i + \epsilon_{i,j}$$

The effect of *Familias en Acción* on women's labor participation

Dependent variable: Woman works

	(1) Probit	(2) LPM	(3) Probit	(4) LPM
Received FeA* First Follow-up dummy	-0.007 (0.021)	-0.009 (0.017)		
CCT subsidy*First Follow-up dummy			0.016 (0.029)	0.015 (0.024)
Observations	8,274	8,274	8,273	8,273

Note: Robust Standard Errors between parentheses. *** p<0.01, ** p<0.05, * p<0.1. We control for the mother and the head of the household's age, education, and if the household has children between 0 and 6 years old, between 7 and 12 and between 13 and 17 years old. Source: FeA survey

3. Divorce

$$divorced_{i,j} = \beta_0 + \beta_1 FeA_{i,j} + \beta_2 Post_{i,j} + \beta_3 Post_{i,j} * FeA_{i,j} + \sigma Pscore_{i,j} + \gamma X_{i,j} + \vartheta_i + \epsilon_{i,j}$$

The effect of *Familias en Acción* on women's marital status

Dependent variable: Woman's marital status: divorced

	(1) Probit	(2) LPM	(3) Probit	(4) LPM
Received FeA* First Follow-up dummy	-0.001425 (0.013)	0.000672 (0.015)		
CCT subsidy*First Follow-up dummy			-0.020512 (0.019)	0.016034 (0.022)
Observations	10,665	10,665	10,663	10,663

Note: Robust Standard Errors between parentheses. *** p<0.01, ** p<0.05, * p<0.1. We control for the mother's age, education, and if the household has children between 0 and 6 years old, between 7 and 12 and between 13 and 17 years old. Source: FeA survey

4. Stress and shortage

1. The effect of the payment's expectations

$$DomesticViol_{i,m,t} = \beta_0 + \beta_1 PS_{i,m,t} + \gamma X_{i,m,t} + \vartheta_i + \sigma_m + \tau_t + \theta_{i,m,t} + \epsilon_{i,m,t}$$

$$DomesticViol_{i,m,t} = \beta_0 + \beta_1 NP_{i,m,t} + \gamma X_{i,m,t} + \vartheta_i + \sigma_m + \tau_t + \theta_{i,m,t} + \epsilon_{i,m,t}$$

- $PS_{i,m,t}$ dummy equal to 1 if the payment was delivered and the families did not expect it.
- $NS_{i,m,t}$ dummy equal to 1 if the payment was not delivered and the families were expecting it.

$$DomesticViol_{i,m,t} = \beta_0 + \beta_1 NP_{i,m,t} + \beta_2 PS_{i,m,t} + \beta_3 Pay_{i,m,t} + \gamma X_{i,m,t} + \vartheta_i + \sigma_m + \tau_t + \theta_{i,m,t} + \epsilon_{i,m,t}$$

4. Stress and Shortage

The effect on domestic violence of the payment expectations

Dependent variable: Domestic Violence rate per 10,000 people

	(1) Basic model	(2) Positive surprise	(3) Negative surprise	(4) Both surprises
Payment month	-0.0644*** (0.0201)			-0.0418** (0.0218)
Positive Surprise payment		-0.0405 (0.0251)		-0.0109 (0.0271)
Negative Surprise payment			0.132*** (0.0443)	0.105** (0.0453)
Observations	35,872	35,872	35,872	35,872
Mean of domestic violence per 10,000 people	1.0874			

Note: The observation unit is municipality-month. Standard Errors, clustered at the municipality level, between parentheses. *** p<0.01, ** p<0.05, * p<0.1. Source: SIFA, Forensis y panel CEDE. All rates are per 10,000 people. Taxes per capita are in thousands of pesos (CPI 2008). All the regressions contain municipalities, year and month fixed effects. Additionally, all the models have a municipality time tendency

Shortage: Positive and Negative surprises

The effect of a negative surprise on the different victims of domestic violence	(1) Intimate Partner Violence	(2) Violence towards the minors	(3) Violence towards the elders	(4) Violence towards other family members
Negative Surprise payment	0.296** (0.131)	0.00209 (0.0462)	0.00440 (0.00591)	0.0364 (0.0392)
Observations	21,840	21,840	21,840	21,840
Mean of dependent variable	1.0874	0.404	0.0304	0.406

The effect of a positive surprise on the different victims of domestic violence	(1) Intimate Partner Violence	(2) Violence towards the minors	(3) Violence towards the elders	(4) Violence towards other family members
Positive Surprise payment	0.0390 (0.0607)	0.0120 (0.0432)	0.0116 (0.00868)	0.0235 (0.0637)
Observations	21,840	21,840	21,840	21,840
Mean of dependent variable	1.0874	0.404	0.0304	0.406

Conclusions

- *Familias en Acción* payment reduces the municipalities' domestic violence rate by 6%
- Channels:
 - The reduction is not occurring through:
 - women empowerment,
 - through a change in women's divorce
 - nor through a change in women's labor participation.
 - The payment reduces shortage in the beneficiary families and thus reduces domestic violence.
- The reduction in domestic violence is fragile and temporal
- Countries need to create specific programs to address the domestic violence problem.

4. Stress and shortage

1. Poverty

$$\text{DomesticViol}_{i,m,t} = \beta_0 + \beta_1 P_{i,m,t} + \beta_2 \text{poverty}_{i,m,t} + \beta_3 \text{Pay}_{i,m,t} * \text{poverty}_{i,m,t} + \gamma X_{i,m,t} \\ + \vartheta_i + \sigma_m + \tau_t + \theta_{i,m,t} + \epsilon_{i,m,t}$$

- $\text{Pay}_{i,m,t}$ dummy for payment delivery in muni i , month m , year t .
- We measure $\text{poverty}_{i,m,t}$ in three ways:
 - $\text{prfam}_{i,m,t}$ is the proportion of beneficiary families in muni i , month m , year t
 - $\text{UBN}_{i,m,t}$ is the Unsatisfied Basic Needs Index in 2005 in the municipality
 - $\text{SISBEN}_{i,m,t}$ is the SISBEN score in the municipality

Shortage

The effect of *Familias en Acción* on domestic violence, according to the proportion of beneficiary families in each municipality

Dependent variable: Domestic Violence rate per 10,000 people

	(1) Proportion of beneficiary families
Payment month	-0.178*** (0.0457)
Proportion of beneficiary families	0.00590 (0.00451)
Proportion of beneficiary families*Payment month	0.00351*** (0.00109)
Controls	Yes
Observations	35,872
R-squared	0.007
Number of municipalities	865
Proportion of families mean	32.17
Mean of dependent variable	1.1

Note: The observation unit is municipality-month. Standard Errors, clustered at the municipality level, between parentheses. *** p<0.01, ** p<0.05, * p<0.1. Source: SIFA, Forensis y panel CEDE. All rates are per 10,000 people. Taxes per capita are in thousands of pesos (CPI 2008). All the regressions contain municipalities, year and month fixed effects. Additionally, all the models have a municipality time tendency