Forced Displacement, Mental Health, and Child Development: Evidence from the Rohingya Refugees

Asad Islam[1] Tanvir Ahmed Mozumder[2] Tabassum Rahman[3]
Tanvir Shatil[4] Abu Siddique[5]

[1]Monash University, CDES & J-PAL

[2]BRAC Institute of Governance & Development

[3]University of Melbourne

[4]BRAC Institute of Governance & Development

[5]KCL/RHUL, IFS, IZA

BIDS, Dhaka

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Motivation

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- We address this gap: large scale cluster-RCT on refugee mental health and ECD

Focus

> *"Still traumatized after fleeing violence in Myanmar, Nazima is struggling to breastfeed her seven-month-old son. Her story is all too common among the hundreds of thousands of women who have taken refuge in Bangladesh."*
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- BRAC pioneered and implemented a program called home-based Humanitarian Play Lab (HPL) → PsyEd + PsySt

This paper

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- The intergenerational transmission of mental health from mothers to children.
- The channel: mothers' mental health → children's development

Contribution

- Psychotherapy:
  - CBT: Rahman et al (2008), Bhalotra et al (2020); Barker et al (2022)
  - BA: Patel et al (2017), Bhat et al (2022); McKelway et al (2022)
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- Contribution
  - Brings together these 3 groups of literature in a well-powered experiment.
  - Well-powered psychosocial programs for refugees are uncommon, and our study now addresses this gap in the literature
  - Relationship between psychoeducation and ECD is understudied in social sciences

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- Our baseline survey:
  - 45% mothers and 48% children had psychological trauma; 18% mothers and 17% children had depressive symptoms
  - 27% children have stunted growth (12% sev); 24% are underweight (8% sev)

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- Also, weekly unstructured social gatherings in the control arm.

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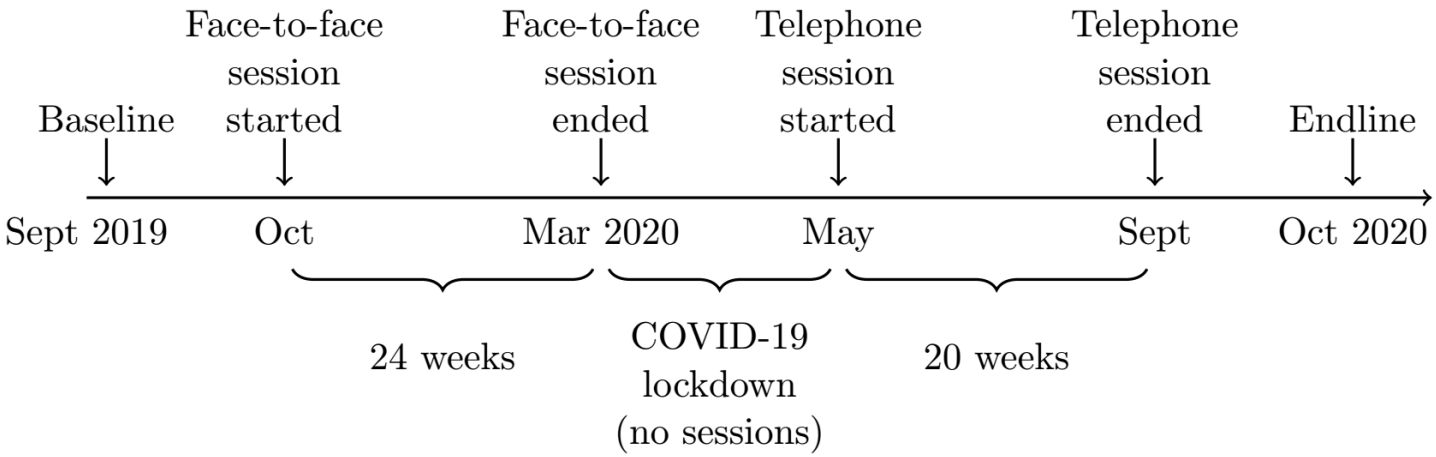
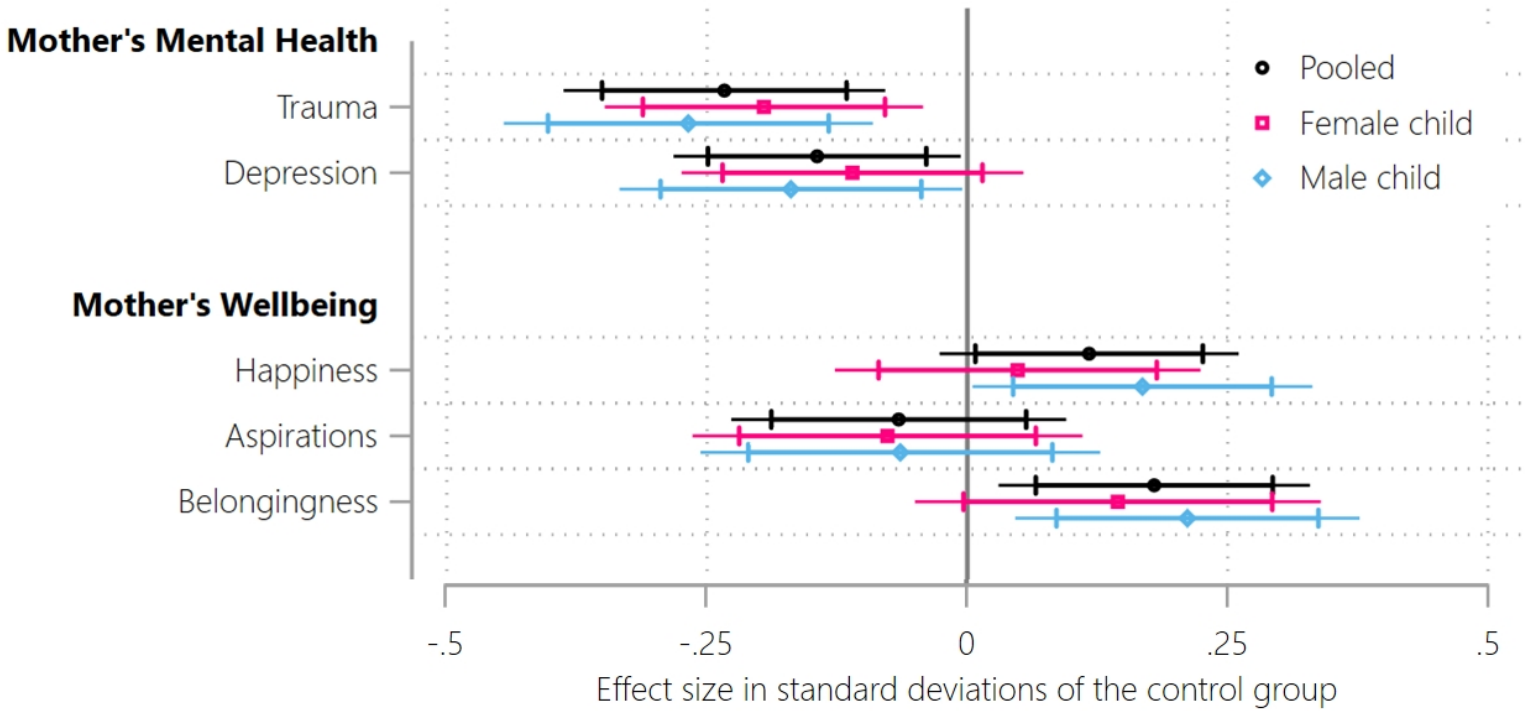
- Baseline and endline survey.

Timeline


Face-to-face session started
Face-to-face session ended
Telephone session started
Telephone session ended
Baseline
Endline
Sept 2019
Oct
Mar 2020
May
Sept
Oct 2020
24 weeks
COVID-19 lockdown (no sessions)
20 weeks

Treatment effect: mothers

Heterogeneity



Table

Channels

Treatment effect: children

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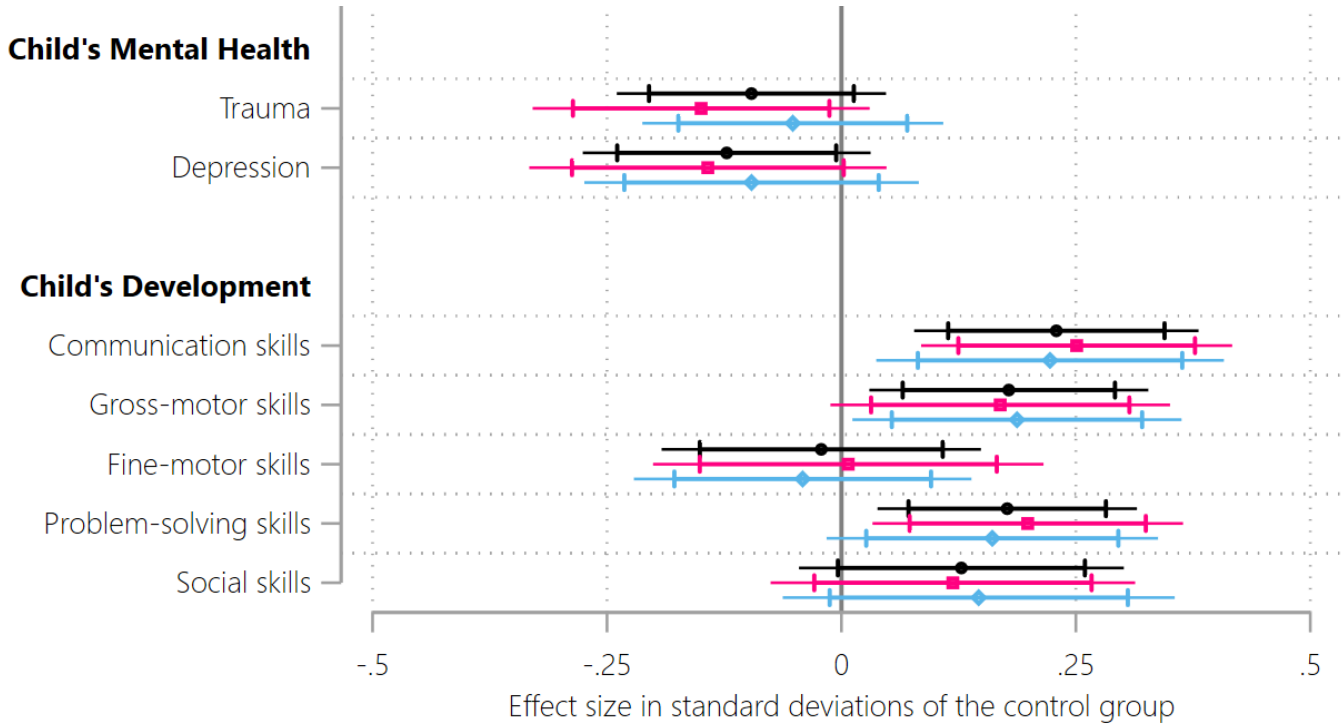


Table Channels

Treatment effect on mental health gap

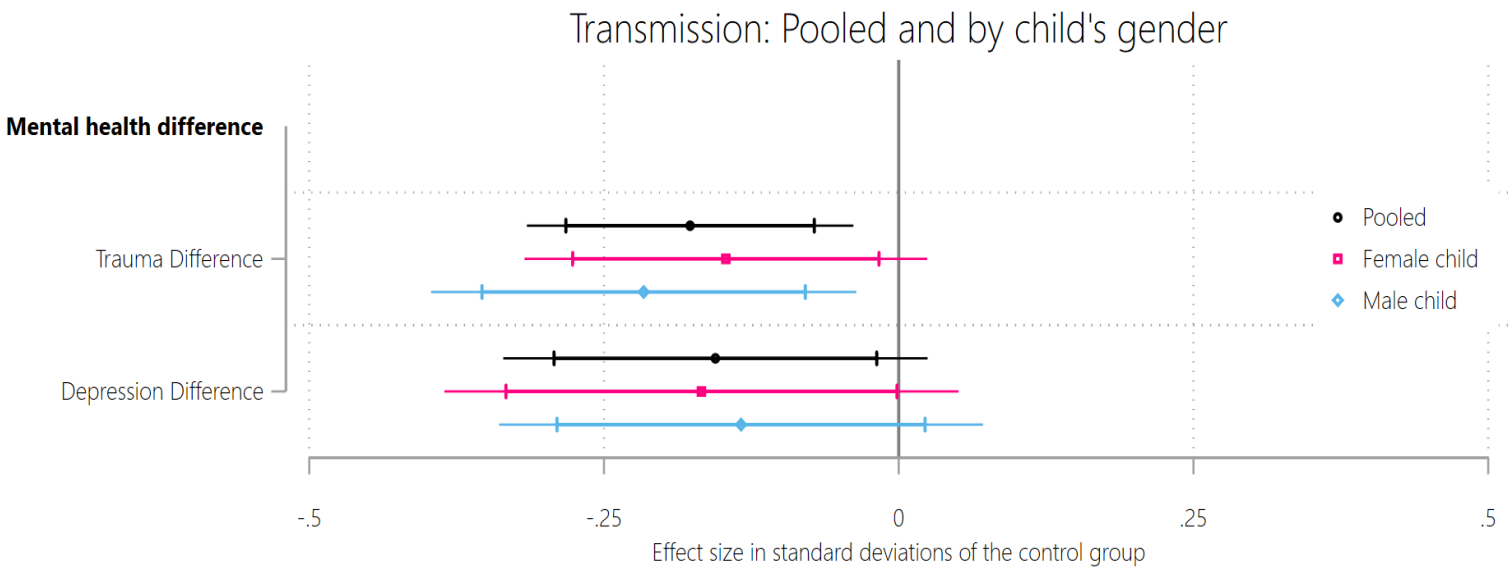
Tab: Corr

$$\triangle_{1ijc} = \kappa_0 + \kappa_1 Treat_{jc} + \triangle_{0ijc} + \Gamma' X_{ijc} + \theta_c + \psi_{ijc} \quad (1)$$

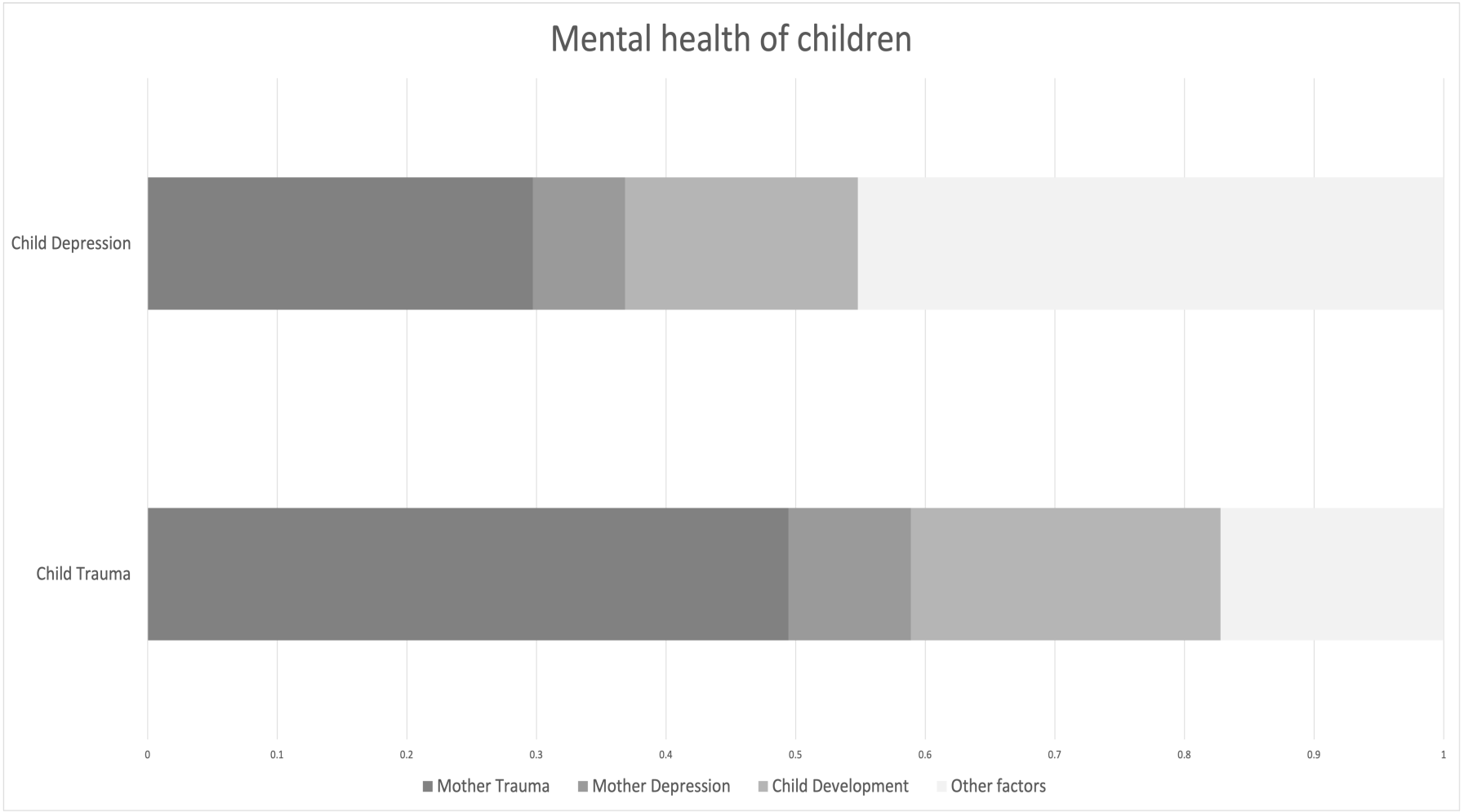
- $\triangle_{1ijc} = |Y_{ijc} - y_{ijc}|$ is the absolute difference in mental health (trauma or depression) between mothers (Y_{ijc}) and children (y_{ijc}) at the endline
- If κ_1 is negative and significant, then it means the program narrowed the mental health gap between mothers and children

Treatment effect on mental health gap

Tab: TE | Robustness



Decomposed effects: trauma and depressive symptoms



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- Most affected mothers (MH): poor MH at baseline, high exposure to violence in Myanmar, high exposure to abuse in camp, less educated, and older.
- Most affected children (ECD): poor MH at baseline, older children, mothers with low exposure to violence in Myanmar, mothers with low exposure to abuse in camp.
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- Most affected children (MH): poor MH at baseline, older children.
- No heterogeneity by other characteristics, including children's gender.

Conclusion

- Community delivered, very cost-effective: less than $45 per dyad, or $1 per dyad per session
- Currently being scaled up: 17,000 mother-child dyads now benefit, plans to expand further

Comments?

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- Lee (2009) bounds (outcomes sorted from better to worse within T and C then trims sample from above and below in T)
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- Our results are not sensitive and conclusions remain robust throughout

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Robustness checks Heterogeneity

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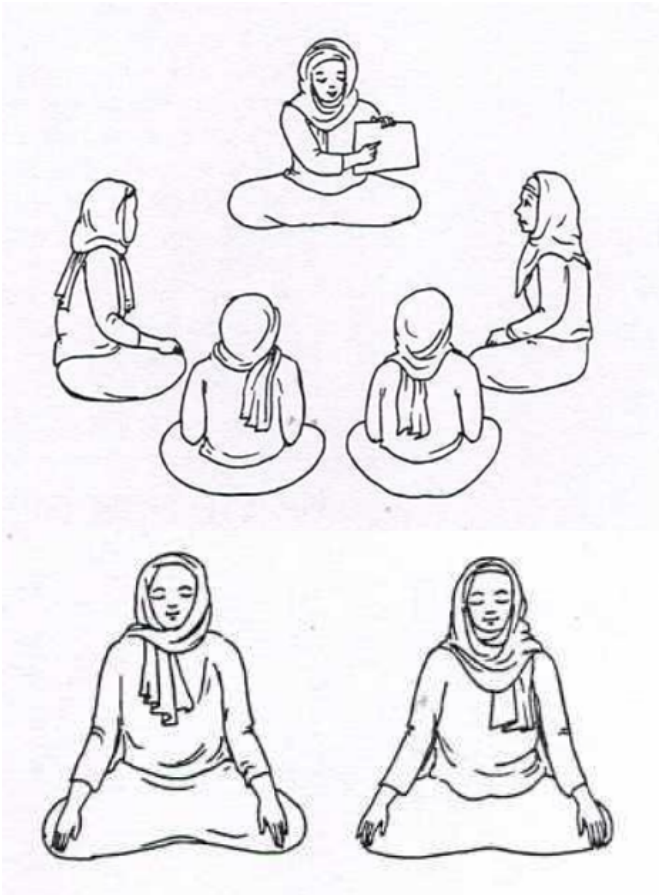
- Social desirability bias do not explain results.
- 'Spillover' checks on nearby blocks: neither augmented TE in treated nor contamination in control ! Blocks

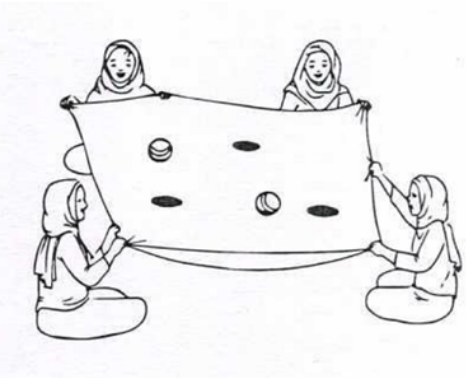
Greetings

Intervention



My well-being

Intervention

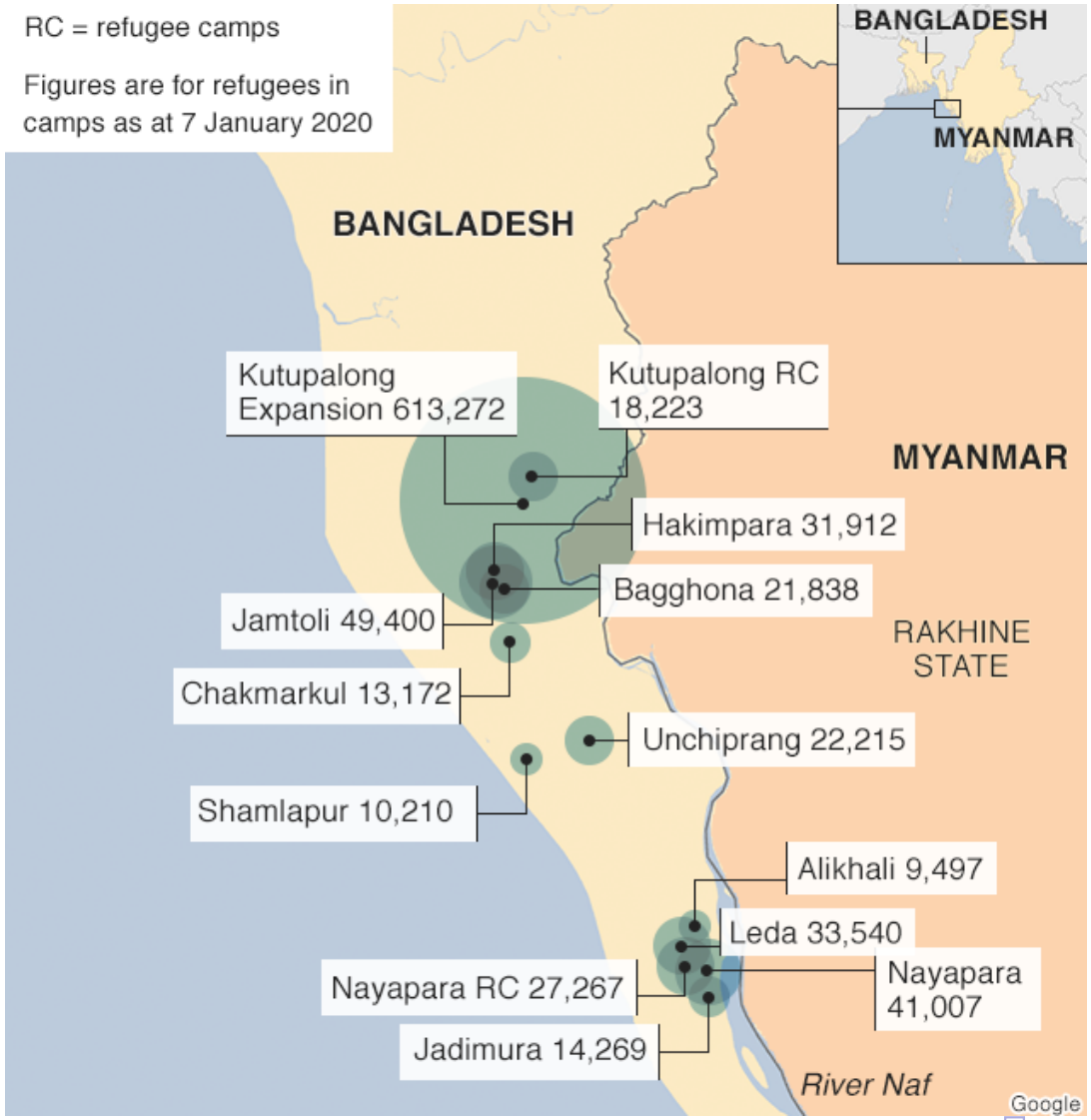


Play and grow

Intervention

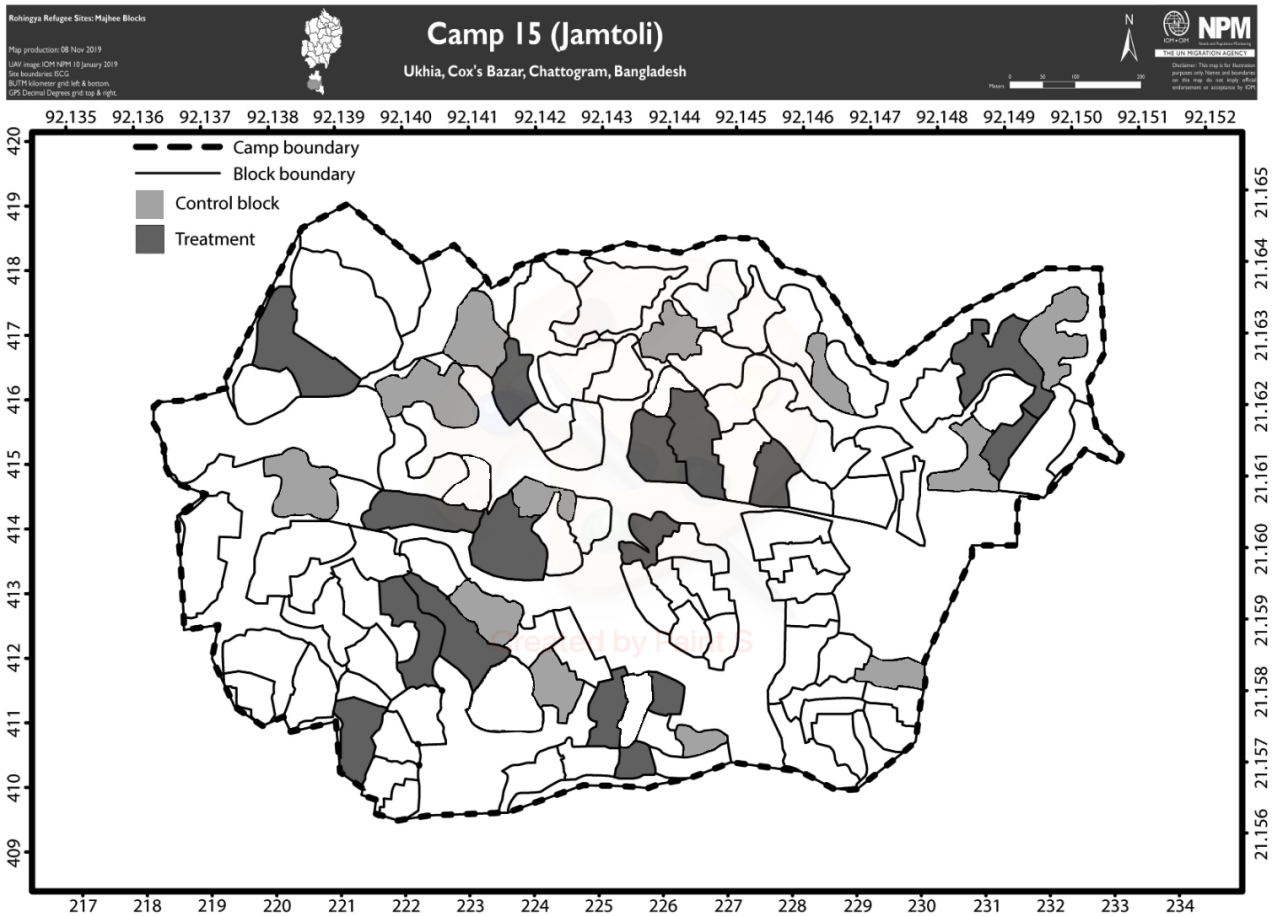
Largest refugee camps

What we do?



A refugee camp, by treatment arm

What we do?



Treatment effect: mothers

Coefplots

	Treatment effects				
	Without covariates	With covariates	Tr./Dep. at baseline	(2)-RI *p*-values	(2)-FWER *p*-values
Dependent variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
A1. Mothers' mental health‡					
Trauma severity	-0.233***	-0.233***	-0.255***	0.00	0.00
	(0.055)	(0.051)	(0.068)		
Depression severity	-0.146**	-0.144***	-0.288***	0.00	0.02
	(0.057)	(0.054)	(0.095)		
Composite mental health index	-0.223***	-0.223***	-0.276***	0.00	0.00
	(0.059)	(0.054)	(0.072)		
A2. Mothers' well-being					
Happiness	0.108*	0.117**	-	0.04	0.04
	(0.057)	(0.056)			
Aspirations	-0.068	-0.066	-	0.32	0.69
	(0.062)	(0.062)			
Belongingness	0.180***	0.179***	-	0.00	0.00
	(0.058)	(0.057)			
Composite SWB index	0.116**	0.119**	-	0.04	0.02
	(0.057)	(0.055)			
Observations	2,845	2,840	$1{,}240^{T}/508^{D}$	-	-

Robust standard errors clustered at the block level are in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Treatment effect: children

Coefplots

	Treatment effects				
	Without covariates	With covariates	Tr./Dep. at baseline	(2)-RI *p*-values	(2)-FWER *p*-values
Dependent variables	(1)	(2)	(3)	(4)	(5)
B1. Children's mental health‡					
Trauma severity	-0.117**	-0.096*	-0.127*	0.08	0.02
	(0.057)	(0.055)	(0.074)		
Depression severity	-0.128**	-0.122**	-0.239**	0.03	0.02
	(0.061)	(0.059)	(0.098)		
Composite mental health index	-0.139**	-0.123**	-0.153**	0.03	0.01
	(0.061)	(0.059)	(0.073)		
B2. Children's development					
Communication skills	0.251***	0.229***	-	0.00	0.00
	(0.061)	(0.059)			
Gross-motor skills	0.197***	0.179***	-	0.00	0.00
	(0.061)	(0.058)			
Fine-motor skills	0.006	-0.021	-	0.76	0.89
	(0.071)	(0.066)			
Problem-solving skills	0.195***	0.177***	-	0.00	0.00
	(0.058)	(0.055)			
Social skills	0.125*	0.128*	-	0.05	0.01
	(0.067)	(0.067)			
Composite child development index	0.203***	0.182***	-	0.00	0.00
	(0.072)	(0.069)			
Observations	2,803	2,798	$1{,}240^{T}/508^{D}$	-	-

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Mental health correlations

Transmission

	Trauma of Children			Depression of Children		
	Pooled	Girls	Boys	Pooled	Girls	Boys
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: At baseline					
Trauma of Mothers	0.188***	0.172***	0.201***	-	-	-
	(0.027)	(0.033)	(0.033)			
Depression of Mothers	-	-	-	0.190***	0.186***	0.200***
				(0.048)	(0.058)	(0.072)
Observations	3,493	1,705	1,788	3,493	1,705	1,788
R-squared	0.094	0.104	0.094	0.048	0.050	0.057
	Panel B: At endline					
Trauma of Mothers	0.246***	0.277***	0.215***	-	-	-
	(0.028)	(0.038)	(0.039)			
Depression of Mothers	-	-	-	0.157***	0.173***	0.140***
				(0.031)	(0.041)	(0.044)
Observations	2,798	1,382	1,416	2,798	1,382	1,416
R-squared	0.083	0.110	0.081	0.034	0.038	0.043

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Treatment effect on mental health gap

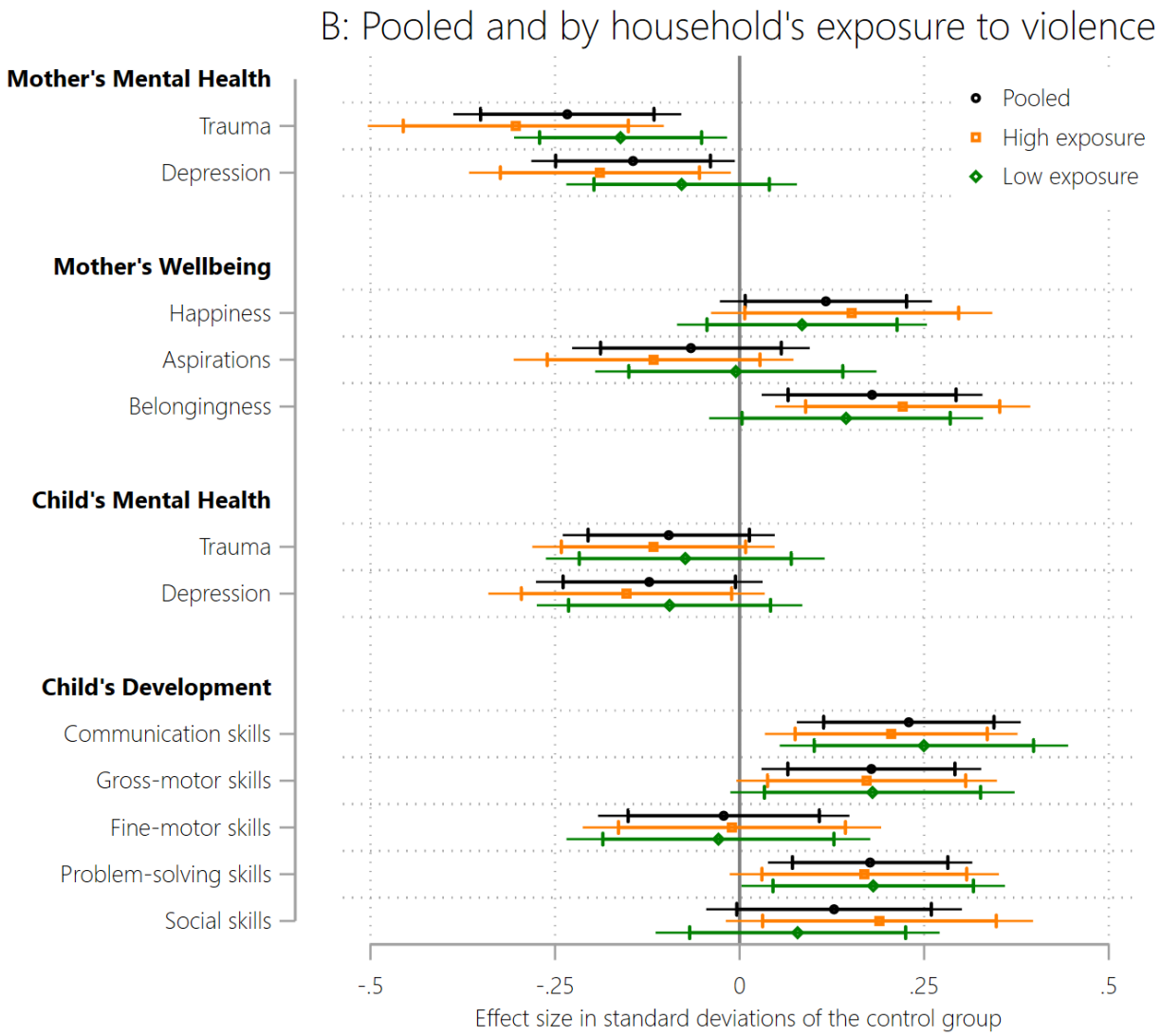
Coefplot

	Treatment effects			
	Without covariates	With covariates	(2)-RI *p*-values	(2)-FWER *p*-values
Dependent variables	(1)	(2)	(3)	(4)
A1. Trauma, pooled				
Difference	-0.188***	-0.177***	0.00	0.00
	(0.056)	(0.054)		
log(Difference)	-0.250***	-0.229**	0.02	0.00
	(0.094)	(0.090)		
A2. Trauma, by child's gender				
Difference, if girl	-0.157**	-0.147**	0.03	-
	(0.066)	(0.066)		
log(Difference), if girl	-0.233**	-0.213**	0.04	-
	(0.108)	(0.107)		
Difference, if boy	-0.221***	-0.216***	0.00	-
	(0.070)	(0.069)		
log(Difference), if boy	-0.265**	-0.248**	0.03	-
	(0.112)	(0.110)		
B1. Depression severity, pooled				
Difference	-0.157**	-0.155**	0.03	0.00
	(0.072)	(0.069)		
log(Difference)	-0.209	-0.214	0.15	0.10
	(0.151)	(0.145)		
B2. Depression severity, by child's gender				
Difference, if girl	-0.167*	-0.167**	0.05	-
	(0.086)	(0.084)		
log(Difference), if girl	-0.210	-0.245	0.16	-
	(0.176)	(0.172)		
Difference, if boy	-0.141*	-0.134*	0.09	-
	(0.081)	(0.079)		
log(Difference), if boy	-0.201	-0.186	0.26	-
	(0.169)	(0.164)		
Observations	2,803	2,798	-	-

Robust standard errors clustered at the block level are in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Heterogeneity by violence exposure

Gender



Direct vs indirect channels

Coefplots

Table: Potential mechanisms

		Treatment effects			
	Control mean	Pooled	Girl child	Boy child	Diff (4)-(3)
Intermediate outcomes	(1)	(2)	(3)	(4)	(5)
A. Mental health of mothers					
Doctor visits (0-4)	1.88	0.004	0.014	-0.011	-0.027
	[0.79]	(0.034)	(0.045)	(0.045)	(0.059)
Disagreements/arguments with spouse (0-4)	1.04	-0.054	-0.070	-0.038	0.022
	[0.90]	(0.034)	(0.053)	(0.045)	(0.068)
Seek help for household chores (0-4)	1.05	-0.016	0.004	-0.041	-0.030
	[0.95]	(0.039)	(0.058)	(0.055)	(0.078)
Communication during lockdown (0-4)	1.93	-0.011	0.011	-0.023	0.005
	[0.78]	(0.029)	(0.041)	(0.043)	(0.055)
Observations	1,166	2,840	1,400	1,440	2,840

Robust standard errors clustered at the block level are in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Other possible channels

Coefplots

Table: Potential mechanisms

		Treatment effects			
	Control mean	Pooled	Girl child	Boy child	Diff (4)-(3)
Intermediate outcomes	(1)	(2)	(3)	(4)	(5)
B. Children's development					
Mother's time input per day (0-24)	9.15	1.498***	1.915***	1.113***	-0.684
	[5.83]	(0.244)	(0.324)	(0.331)	(0.436)
Father's time input per day (0-24)	5.14	0.066	-0.053	0.144	0.215
	[3.01]	(0.114)	(0.168)	(0.160)	(0.226)
Age stopped breastfeeding	20.83	0.161	-0.161	0.414*	0.653*
	[5.04]	(0.173)	(0.267)	(0.250)	(0.361)
Times feeding child per day	3.97	0.011	0.041	-0.017	-0.074
	[1.47]	(0.057)	(0.080)	(0.074)	(0.104)
Negative parenting (0-4)	0.67	-0.022*	-0.027	-0.016	0.004
	[0.33]	(0.011)	(0.017)	(0.014)	(0.022)
Ask others to babysit (0-4)	0.87	0.011	0.035	-0.007	-0.060
	[0.94]	(0.038)	(0.058)	(0.052)	(0.071)
Prevalence of indoor smoking (0-4)	0.32	0.036	0.067	0.006	-0.028
	[0.76]	(0.030)	(0.044)	(0.041)	(0.059)
Let child walk/play barefoot (0-4)	0.65	-0.069**	-0.029	-0.117***	-0.056
	[0.83]	(0.032)	(0.046)	(0.042)	(0.059)
Observations	1,166	2,840	1,400	1,440	2,840

Robust standard errors clustered at the block level are in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Decomposed effects: ASQ-3