



# Family and Community Social Capital on Children's Behavior

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# Research Question

- How **family and community social capital** influence preschool children's **behavior problems** from intact families in Singapore?
  - Do family and community social capital affect children's behavioral outcomes separately or interactively?



- Positive effects of family & community social capital on **school-aged children, adolescents'/youth's** outcomes
  - **Behavioral outcomes**
    - Reduce externalizing and internalizing behavior problems (Dufur et al., 2008; Parcel & Menaghan, 1993, 1994) Reduce risky behavior and delinquencies (Loeber & Stouthamer-Loeber, 1986; Osgood & Anderson, 2004; Sampson, 1997; Wright et al., 2006; Wright et al., 2001)
  - **Cognitive outcomes**
    - Promote letter-word scores (Hsin, 2009; Hsin & Felfe, 2014) verbal ability (Liu & Xie, 2015)
  - **Academic achievements & Psychological outcomes**
    - Reduce drop-off plan and lower depressive symptoms among migrant adolescents in China (Wu et al., 2010, 2014, 2015; Wu, 2017).
    - Promote mental health, life satisfaction of young adolescents in Netherlands (Drukker et al., 2003)

- Mediating or moderating role of family & community social capital
  - Mediated or moderated family or community socioeconomic disadvantages (or lower SES) on children's behavioral, psychological and somatic symptoms (Caughy et al., 2008; Caughy et al., 2003; Elgar et al., 2010; Li et al., 2018; Odgers et al., 2009; Drucker et al., 2003)
- Research gaps
  - Limited studies on how community SC influence preschool children's development
  - Very few studies were conducted in Asian contexts
    - Coleman's SC theory is more suitable for middle-class Anglo-American communities, cannot be easily generalized (Offer & Schneider, 2007).

# Theoretical Framework

- **Social capital theory**

- Family SC refers to the **bonds and relationships** between parents (or other family members) and children
  - Parental involvement and monitoring children's behaviors.
  - Provides children to get access to parents' human capital and financial capital (Coleman, 1988, 1990).
- Community SC refers to shared values, mutual trust, norms of reciprocity, and a sense of belonging to a community (Coleman, 1988; Ehsan & De Silva, 2015; Putnam, 1995, 2000; Putnam et al., 1993; Son, 2020)
  - Facilitate informal social control and supervision of children (monitoring functions) (Sampson et al., 1997, 1999; Wu, et al., 2015)

- **Bronfenbrenner's ecological theory**

- A child's development is based on his/her interactions with "immediate settings" consisting of the microsystem, mesosystem, exosystem, macrosystem, and chronosystem.
- Microsystem is a key developmental arena in promoting "proximal process"

- Singapore Longitudinal Early Development Study (SG LEADS) provides the **first nationally representative sample** of families with children aged 0-7 in Singapore.
  - The survey adopted a **multi-stage stratified probability sampling** and oversampled low-income groups.
- Analytic sample:
  - Wave 1 (2018-2019): 5,021 children from 3,485 HHs. 95% of PCGs are mothers.
  - This study only include intact families where mothers are PCGs, **N=4,526** children.
  - Children's behavior problem index (BPI) only for those aged above 3 years old. So final sample for multilevel analyses: **N=2,636** children



For more information: <https://fass.nus.edu.sg/cfpr/sgleads/>

Singapore Longitudinal EARly Development Study

# Measurements

- DV: **children's BPI**: 30 items from the Child Behavior Checklist (CBCL) for children aged 3-6 (Peterson & Zill, 1986). 26 items were included after conducting exploratory factor analysis.
  - Externalizing behavior problem index (EBPI): 13 items ( $\alpha = .86$ )
  - Internalizing behavior problem index (IBPI): 13 items ( $\alpha = .88$ )
- IVs:
  - **Family SC**: mothers' report of parent-child closeness (composite score of both mother- and father-child closeness)
  - **Community SC**: mothers' report of perceptions of living in the neighborhood of 4 statements on a 7-point Likert scale (1=*lowest* to 7=*highest*) (a) (neighbors living in the same community are) friendly to each other; (b) take care of each other; (c) trust each other; and (d) familiar with each other. ( $\alpha = .90$ )
- Controls:
  - Family SES: parents' educational level and employment status, fathers' occupation and race, and the total household income in the past year.
  - Maternal emotional distress (6-item scale) ( $\alpha = .87$ )
  - Other demographic variables: parents' age, child's age, race, gender, and the number of children under 18 living in the household.

- **Multilevel linear regressions**
  - Use group-mean centering for level 1 predictor (family social capital)
  - Use grand-mean centering for level 2 predictor (community social capital)
  - All the control variables were uncentered.
- **Multiple imputation**
  - Only 2 variables (mothers' employment status and fathers' occupations) have over 3% of missing data.
  - MI with chained equations (25 imputed models)
- **Sampling weight at child level was added to regression models at the first level.**



**Results: Summary statistics of selected sociodemographic characteristics**

Variables	Mean (SD) or %	Mother (%)	Father (%)
<b>Family social capital (1-4)</b>	3.85 (0.29)		
<b>Community social capital (1-7)</b>	5.08 (0.84)		
Family Characteristics			
<b>Child's EBPI (1-3)</b>	1.41 (0.35)		
<b>Child's IBPI (1-3)</b>	1.15 (0.25)		
Child's age (year)	4.95 (1.19)		
Child's gender			
Male	52.25		
Female	47.75		
Child's Ethnicity			
Chinese	68.36		
Malay	15.59		
Indian	11.64		
Others	4.41		
Educational level			
Lower than secondary school		21.85	22.42
Postsecondary diploma & qualification		30.43	30.62
Bachelor's degree and above		47.72	46.96
Fathers' occupation			
Legislators, Senior Officials and Managers			20.23
Professionals			36.74
Associated Professionals and Technicians			20.14
Clerical Support Workers; Service and Sales Workers; Craftsmen and Related Trade Workers			12.01
Machine Operators, Assemblers, Cleaners			10.88

Note: N=2,636. All values weighted at child level.

- Model 0:

$$EBPI_{ij} = \beta_{0j} + \gamma_{ij}$$

$$\beta_{0j} = \gamma_{00} + \mu_{0j}$$

- Model 1:

$$EBPI_{ij} = \beta_{0j} + \beta_{1j}familySC_{ij} + \gamma_{ij}$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01}meanFSC + \mu_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}meanFSC + \mu_{1j}$$

- Model 2:

$$EBPI_{ij} = \beta_{0j} + \beta_{1j}familySC_{ij} + \gamma_{ij}$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01}meanFSC + \gamma_{0n}Controls + \mu_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}meanFSC + \mu_{1j}$$

- Model 3:

$$EBPI_{ij} = \beta_{0j} + \beta_{1j}familySC_{ij} + \gamma_{ij}$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01}meanFSC + \gamma_{02}CSC + \gamma_{0n}Controls + \mu_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}meanFSC + \gamma_{12}CSC + \mu_{1j}$$

# Results: MLM (EBPI)

Table 2. Multilevel linear regressions on predicting associations between family and community social capital and children’s externalizing behavior problems

	<b>Model 0</b>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>
<b>Variables</b>	EBPI	EBPI	EBPI	EBPI
<b>Family social capital</b>		<b>-0.20***</b>	<b>-0.17***</b>	<b>-0.16***</b>
	ICC= .09	(0.03)	(0.03)	(0.03)
<b>Family social capital (group mean)</b>		-0.21	-0.14	-0.12
		(0.42)	(0.49)	(0.50)
<b>Community social capital</b>				<b>-0.02*</b>
				(0.01)
<b>Control variables</b>	No	No	Yes	Yes
<b>Constant</b>	1.40***	2.20	1.82	1.72
	(0.02)	(1.61)	(1.89)	(1.92)
<b>Obs</b>	2,636	2,636	2,603	2,603
<b>number of groups</b>	34	34	34	34

Notes: Robust standard errors in parentheses. Sampling weights at child level were specified at the first level. Control variables include fathers’ age, education, employment status, occupation; mothers’ age, employment status, maternal emotional distress; child’s age, gender, race; number of children (<18) living in the household, and household income (logged).

\*p< .05. \*\*p< .01. \*\*\*p< .001.

# Results: MLM (IBPI)

Table 3. Multilevel linear regressions on predicting associations between family and community social capital and children’s internalizing behavior problems

	Model 0	Model 1	Model 2	Model 3
<b>Variables</b>	IBPI	IBPI	IBPI	IBPI
<b>Family social capital</b>	ICC= .09	-0.15***	-0.12***	-0.12***
		(0.02)	(0.03)	(0.03)
<b>Family social capital (group mean)</b>		0.02	0.04	0.07
		(0.39)	(0.42)	(0.43)
<b>Community social capital</b>				-0.02***
				(0.01)
<b>Control variables</b>	No	No	Yes	Yes
<b>Constant</b>	1.15***	1.07	0.98	0.87
	(0.02)	(1.47)	(1.63)	(1.68)
<b>Obs</b>	2,636	2,636	2,603	2,603
<b>number of groups</b>	34	34	34	34

Notes: Robust standard errors in parentheses. Sampling weights at child level were specified at the first level. Control variables include fathers’ age, education, employment status, occupation; mothers’ age, employment status, maternal emotional distress; child’s age, gender, race; number of children (<18) living in the household, and household income (logged).  
 \*p< .05. \*\*p< .01. \*\*\*p< .001.

# Conclusion

- Communities explained **9%** of children's behavior problems. (ICC= .09 for EBPI & IBPI)
- **Both family and community social capital** had significantly negative associations with children's externalizing and internalizing behavior problems.
  - Generalized family SC theory to an Asian context.
  - Echoed the ecological theory that "family" and "neighborhood" are nested systems.
    - Community SC can also promote children's behavioral outcomes **even at an early childhood stage**.
  - Stronger effect of family SC than community SC in predicting fewer behavior problems of children;
    - **Family as the microsystem is the most important context for preschool children's development.**
  - The effect of family SC on children's behavior problems did not vary significantly across communities.
    - Singaporean context: build cohesive, compassionate and self-reliant communities. The CDCs strengthen social infrastructure, build social capital and resilience, and promote the culture of giving back.

# Limitations

- Only based on cross-sectional (wave 1) data of SG LEADS, cannot establish causal relationships between family & community social capital and children's behavior problems;
  - May have selection bias
- Did not test other elements of community SC (i.e. community sense of belonging).
- This study did not find out the random effect of family social capital across communities

# Thank You !

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