

Developmental Disparities between Rural and Urban Children in China

Lijun Chen
Fred Wulczyn

Presentation at the ISCI 2017 Conference

ChapinHall at the University of Chicago
Policy research that benefits children, families, and their communities

Goals of the Study

- I. Describe and compare the developmental status of different groups of children by region and family structure in various domains
- II. Identify vulnerable groups: rural children in general, children left behind by migrant parents and children with single or no parent
- III. Examine social ecological contexts of vulnerable children and identify risk factors in family contexts

China Family Panel Studies (CFPS) Survey

1. Biennial longitudinal household survey, with a 2010 baseline sample of 14,960 households
2. Nationally representative survey, with information on all household members
 - Child sample: 8900 children aged 0 to 15 in 6317 families from over 600 communities
 - Coverage of all major domains of child wellbeing and development: physical health, socio-emotional health, cognitive ability, and schooling
 - Ecological contexts: caregiver, family, school, community

Family Structure of Rural and Urban Children

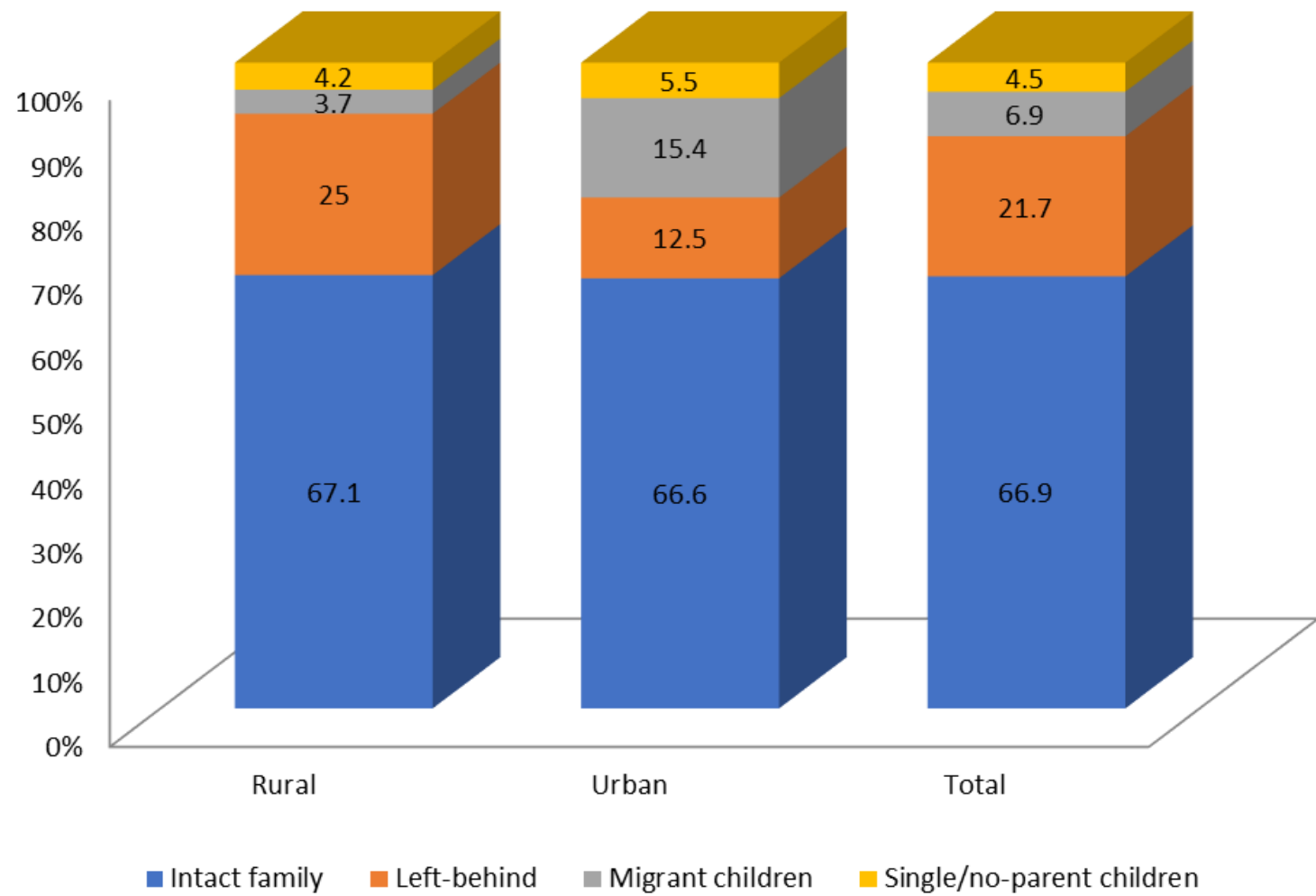
Variables	<u>Rural Village</u>		<u>Urban Neighborhood</u>		Total	
	Col %	N	Col %	N	Col %	N
# of Parents at Home *						
None	15.0%	1,001	7.9%	174	13.1%	1,175
1 parent	15.5%	1,126	12.7%	268	14.8%	1,394
2 parents	69.5%	4,668	79.4%	1,753	72.1%	6,421
Family Structure *						
Rural intact family	67.1%	4,494			49.0%	4,494
Urban intact family			66.6%	1,463	17.9%	1,463
Left-behind children	25.0%	1,759	12.5%	275	21.7%	2,034
Migrant children	3.7%	277	15.4%	345	6.9%	622
Single/no-parent children	4.2%	265	5.5%	112	4.5%	377
Total Percent	73.1%	6,795	26.9%	2,195	100%	8,990

Note : 2010 CFPS child sample $N=8,990$. Percentages are weighted; counts are unweighted.

* $p < .05$ based on designed-based Pearson chi square statistic.

Child Living Arrangement in Rural and Urban

Children in Different Family Structure in Rural and Urban Areas

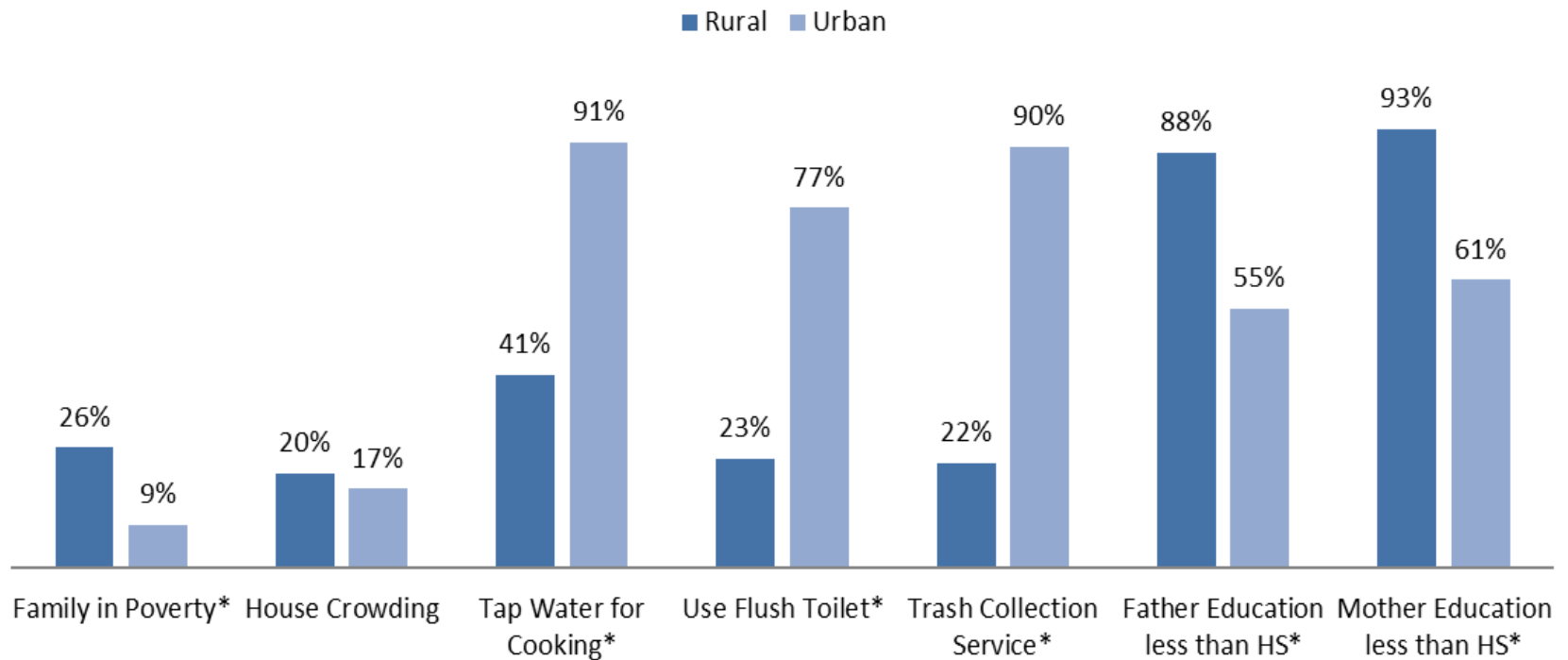


Multiple Domains on Child Wellbeing

- Economic wellbeing of children
- Physical health of children
- Psychological and social wellbeing
- Education and Cognitive Development
- Parental involvement and parenting practice
- Family contexts and parenting on child development outcomes

Economic Wellbeing: Rural vs Urban

Chart 3.1 Family Conditions of Children in Rural and Urban China in 2010



Note: * $p < .05$ based on design-based Pearson chi-square statistic.

Source: CFPS(2010).

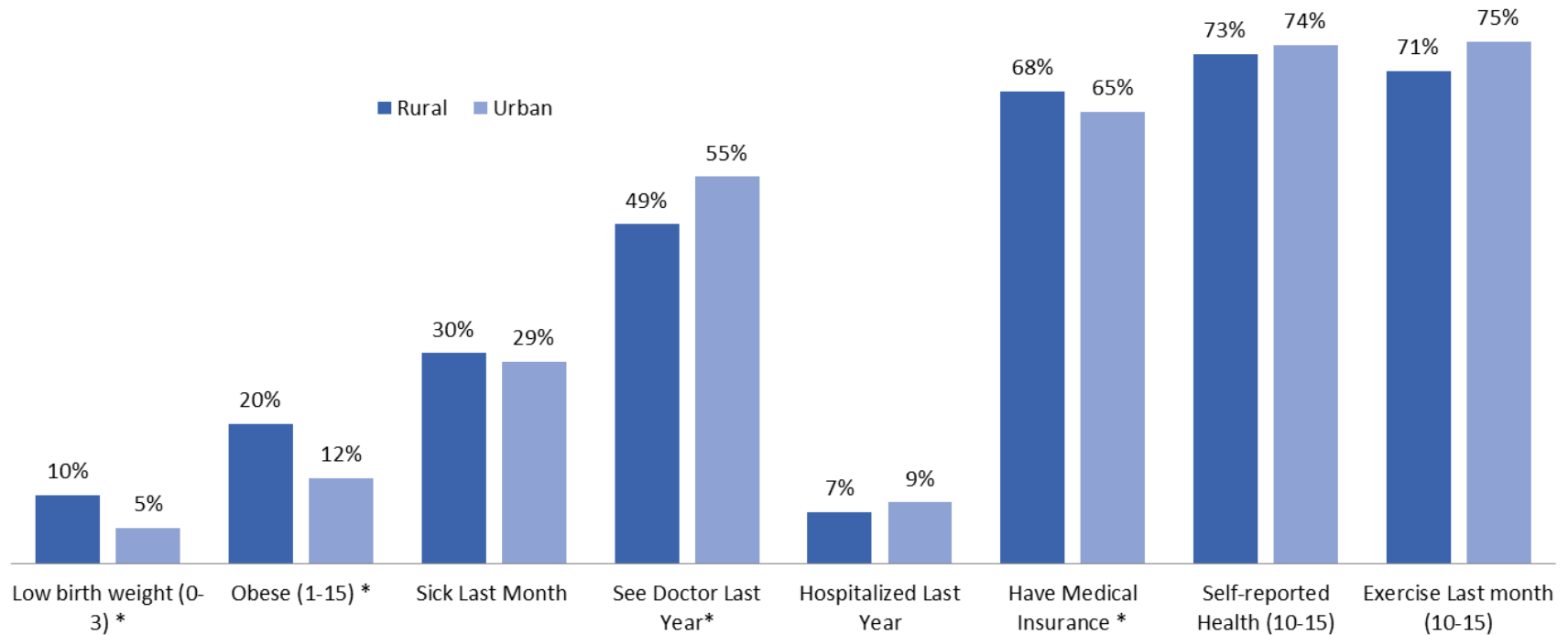
Economic Wellbeing: Family Structure

Variables	Rural Intact (%)	Urban Intact (%)	Left behind (%)	Migrant (%)	Single/No parent (%)
Family in poverty*	24.6	6.6	23.9	11.8	31.9
House crowding *	20.9	15.7	16.6	20.1	26.9
Tap water for cooking*	44.3	91.3	40	71.8	59.8
Clean fuel for cooking*	39.3	85	33.8	72.4	42.6
Use flush toilet*	24.2	76.5	26.8	64.9	39.8
Trash collection service*	26.1	91.5	22.1	67.2	40.7
Father education less than HS	88.5	51.3	84.1	70.9	82.8
Mother education less than H	93.5	58.4	89.6	75	85.1

Note : CFPS child sample $N = 8,990$, results are weighted. * $p < .05$ based on design-based Pearson chi square

Physical Health: Rural vs Urban Children

Chart 4.1 Health Conditions of Children in Rural and Urban Areas in 2010



Note: 1. * $p < .05$ based on designed-based Pearson chi square statistic.

Data Source: CFPS (2010)

Physical Health by Family Structure

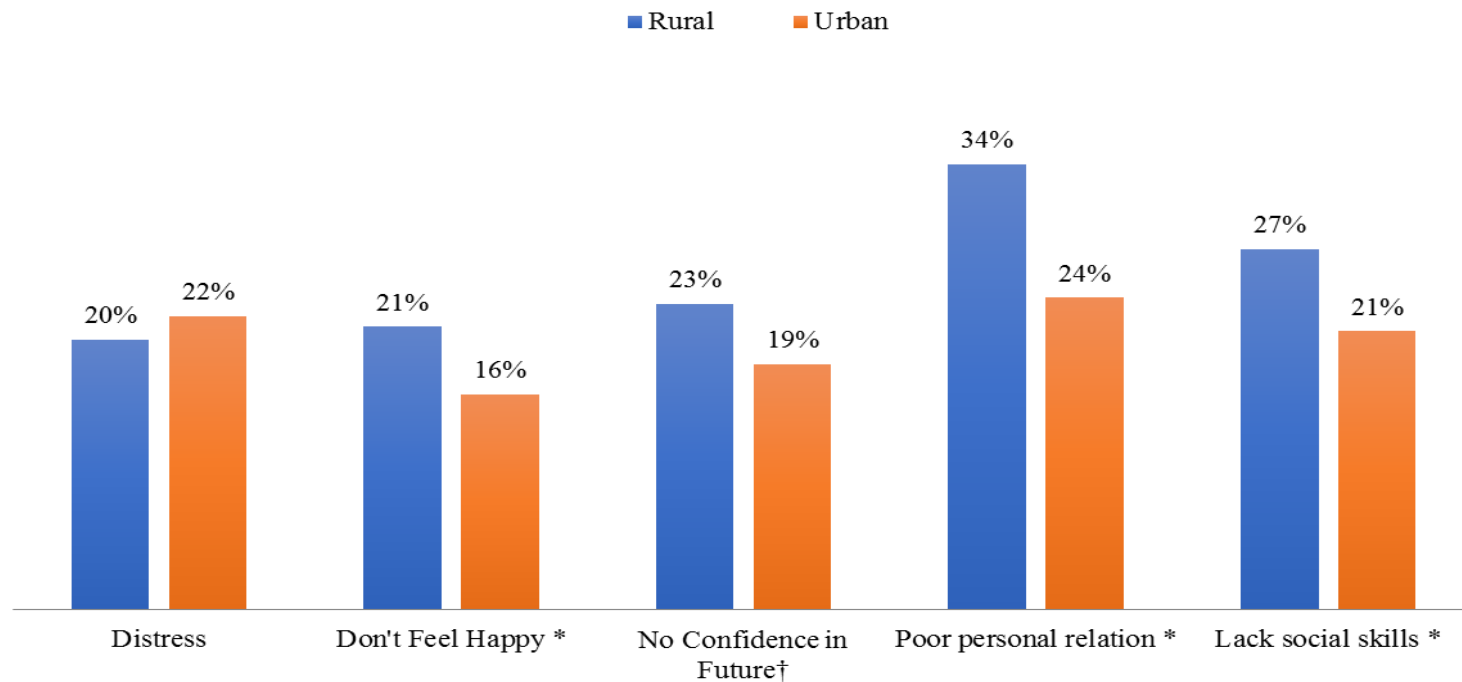
Variables	Rural intact (%)	Urban intact (%)	Left behind (%)	Migrant (%)	Single/no- parent (%)
Low birth Weight (0-3 years old)†	9.1	4.6	9.9	5.9	30.6
Sick last month (0-3 years old) *	43.6	39.0	56.6	43.3	60.1
See doctor last year*	48.0	56.5	58.0	50.6	48.6
Hospitalized last year	7.1	8.2	9.4	8.8	7.4
Have medical insurance *	66.1	60.7	61.9	48.5	62.0
Self-reported health (10-15 years old)	73.7	73.4	73.9	71.6	71.7
Exercise last month (10-15 years old)	71.6	74.5	69.8	73.6	70.9

Note : Sample sizes vary based on age group. Results weighted.

† .05 < p < .10; * p < .05 based on design-based Pearson chi square statistic.

Psychological and Social Wellbeing: Rural vs Urban

Psychological and Social Well-being Indicators for Children 10 to 15 Years Old



Note: 1. * $p < .05$, .05, † $p < .10$ based on designed-based Pearson chi square statistic.
Data Source: CFPS 2010.

Psychological and Social Wellbeing by Family Structure

Table 5.2 Psychological and Social Wellbeing for Children Aged 10 and 15 by Family Structure (N=3158, weighted)

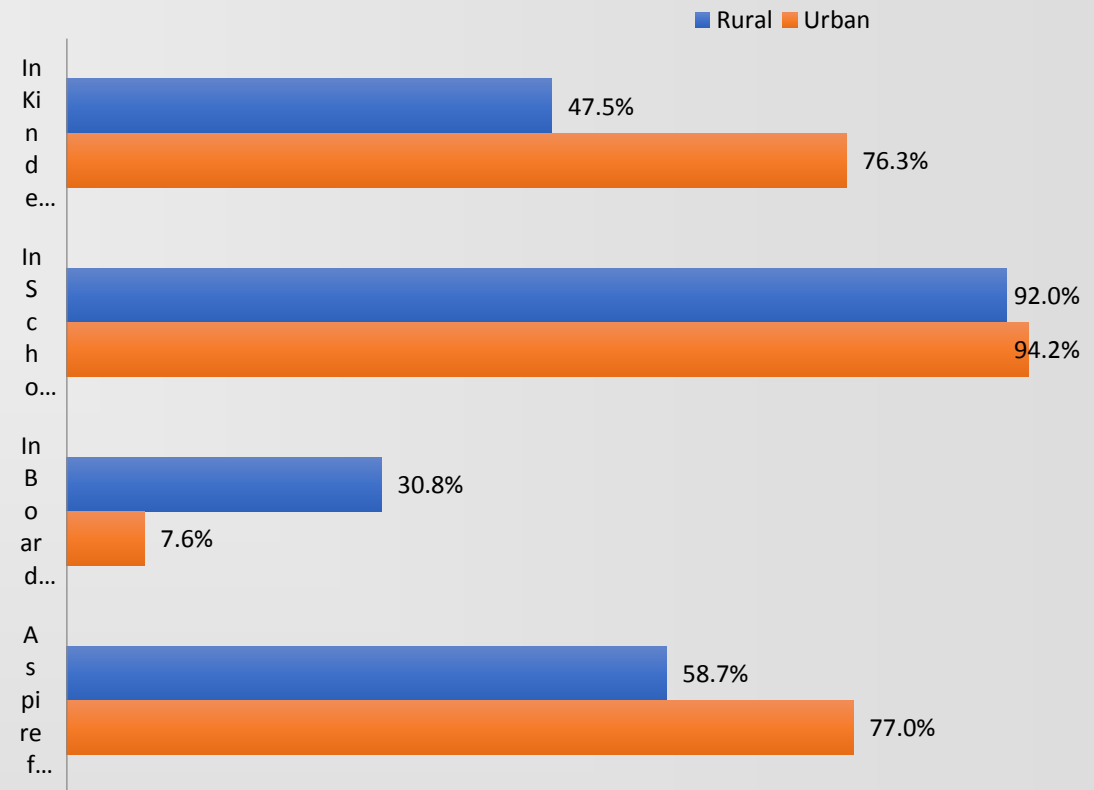
Variables	Rural Intact	Urban intact	Left- behind	Migrant	Single/No- parent
Mental Distress†	18.8%	24.6%	21.4%	18.1%	30.2%
Don't Feel Happy†	20.2%	17.7%	19.9%	16.1%	30.3%
No Confidence in Future †	20.9%	18.6%	25.9%	24.1%	27.8%
Lack Good Personal Relations*	33.3%	23.0%	33.5%	22.8%	36.7%
Lack Good Social Skill	26.2%	22.1%	27.3%	20.2%	31.7%

Note: † .05 < p < .10, * p < .05 based on design-based Pearson chi square statistic.

Child Education: Rural vs. Urban

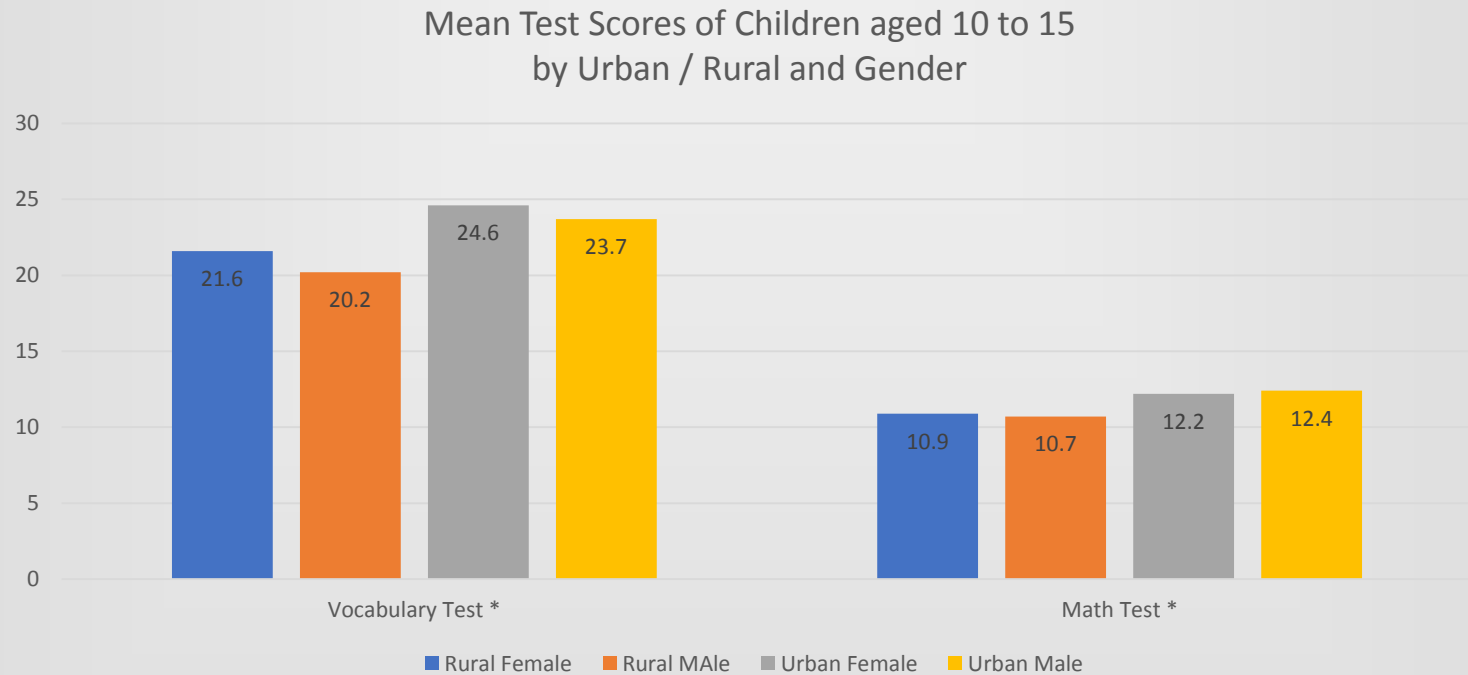
- Lower % of rural kids in preschool or kindergarten
- High % of rural students in boarding school
- Lower % of rural kids aspire to college
- Similar high % of rural / urban kids in school (9-year compulsory education)

Chart 6.1 Schooling of Children in Rural and Urban China in 2010



Note: * $p < .05$ based on design-based Pearson chi square statistic.
Source: CFPS(2010).

Vocabulary and math test score: Rural vs Urban



- ✓ **Regardless of gender, rural children have lower scores in either vocabulary or math test.**
- ✓ **Rural boys have the lowest mean scores in both tests.**

Child Schooling: by Family Structure

Table 6.2 Percent Distribution of Child Schooling by Family Structure in 2010, CFPS (Sample size varies, weighted)

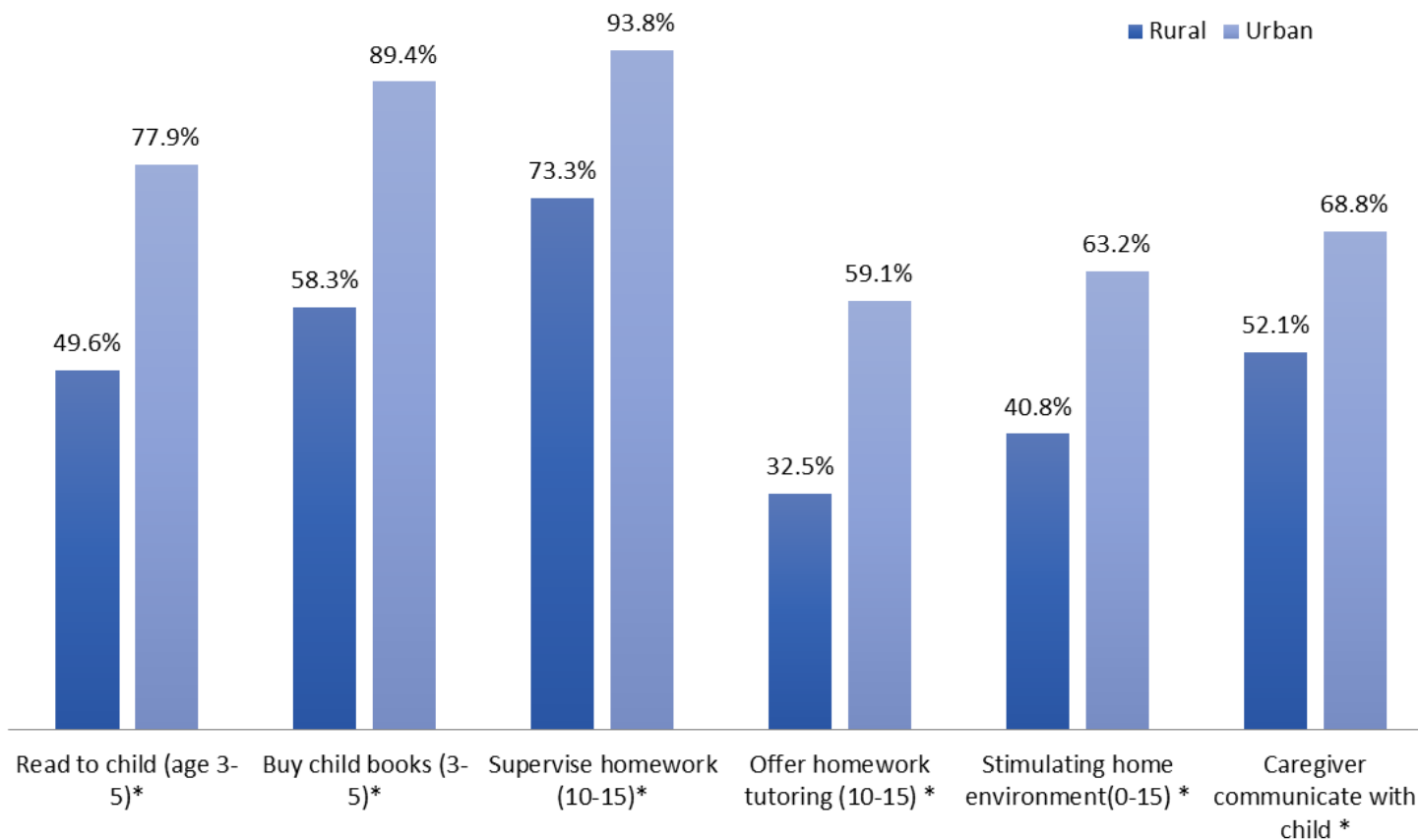
Variables	Rural Intact	Urban Intact	Left-behind	Migrant	Single/no-parent
In Kindergarten (age 3-5) *	50.3%	79.8%	46.0%	61.9%	56.4%
In School (age 6-15)	92.6%	94.7%	92.3%	90.9%	89.2%
In Boarding School (10-15)*	31.8%	7.8%	25.6%	13.6%	17.3%
Aspire for college degree (10-15)*	60.3%	78.7%	60.4%	69.0%	53.8%

Note: * $p < .05$ based on design-based Pearson chi square statistic.

- ✓ A lower % of left-behind children attend kindergarten and preschool than any other child groups.
- ✓ Children with single or no parent have the lowest % to harbor college aspirations.

Home Environment and Caregiver Involvement: Rural vs. Urban Children in 2010

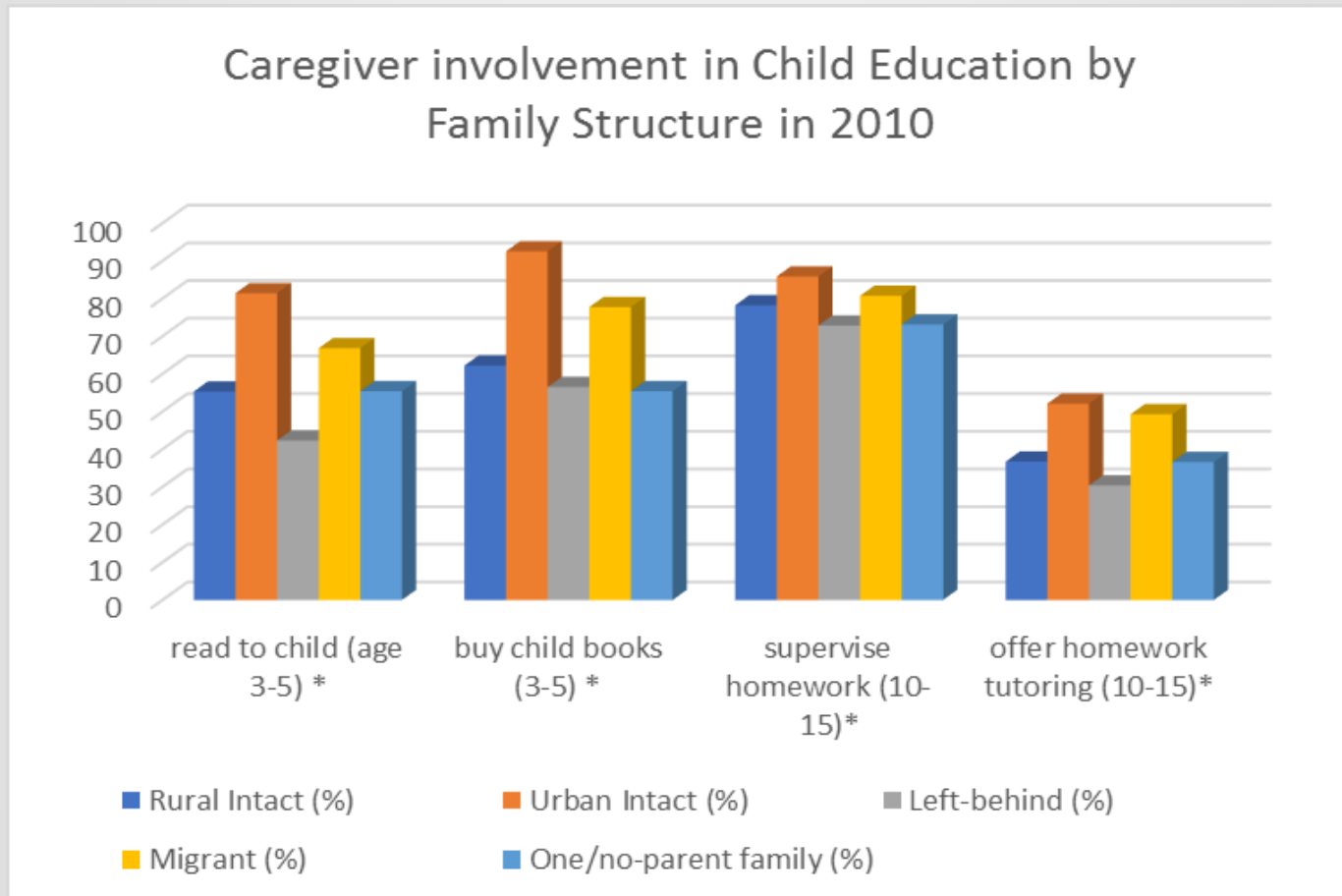
Chart 7.1 Parental Involvement in Child Education in Rural and Urban China in 2010



Note: * $p < 0.05$ based on designed-based pearson chi square statistic.

Data source: CFPS 2010.

Caregiver Involvement in Education by Family Structure



- ❑ Left-behind children have the lowest % of caregiver involvement, and urban intact families have the most involvement.

Positive Parenting Style by Community Type and Family Structure

Table 7.5. Mean Score of Parenting Behavior for 11-year-old by Community Type and Family Structure in 2010

Positive Parenting Behavior	Rural/Urban		Family Structure				
	Rural	Urban	Rural intact	Urban intact	Left-behind	Migrant	One/no parent
Encouragement *	-0.101	0.191	-0.077 ^{ab}	0.116 ^a	0.082	0.187	0.227 ^b
Engagement *	-0.022	0.29	0.017 ^a	0.321 ^{abc}	-0.020 ^b	-0.068 ^c	0.171
Interaction *	-0.095	0.251	-0.056 ^a	0.252 ^{ab}	-0.141 ^{bc}	0.093	0.312 ^c

Note : Sample size $N=566$, results weighted. Analysis based on factor scores from a Varimax factor analysis of 12 items.

Any two categories with same subscripted letter are significantly different at † $p < 0.10$, * $p < 0.05$ level.

- Caregivers in urban areas practice more positive parenting behavior than rural caregivers both in rural intact and left-behind families.

Family Resources and Parenting on Child Outcomes: Regression Model Results

Covariates	Logistic Regression Models				Linear Regression Models			
	<u>Being Happy</u>		<u>Good Social Skill</u>		<u>Word Test Score</u>		<u>Math Test Score</u>	
	Odds Ratio	P	Odds Ratio	P	Coefficient	P	Coefficient	P
Family Structure (urban intact as ref)								
Rural intact family	0.369	†	0.438	*	-1.904	†	-0.961	*
Left-behind children	0.363		0.489		-1.661		-1.021	*
Migrant children	0.481		0.234	*	3.432	**	0.342	
Broken family children	0.872		0.087	**	-2.788		-1.324	†
Child male	0.776		0.713		-0.657		0.583	*
Han ethnicity	1.159		1.133		2.446	*	0.549	
Family in Poverty	1.049		0.625	†	-1.701	†	-0.001	
Mom with high school education	0.726		1.665		1.105		0.621	
Parenting Behavior								
Encourage	2.662	**	1.339	†	2.372	**	0.846	*
Engage	1.304	†	1.029		0.376		0.245	
Interact	1.465	†	1.387	†	-0.597		-0.061	
Intercept	17.696		5.385		20.214		8.965	
N	566		566		566		566	
R-squared					0.204		0.113	
Model Fit	F(11,146)=4.40		F(11,146)=3.15		F(11,146)=8.67		F(11,146)=4.31	

Note: Only 11-year old children included. † p<0.10, * p<0.05, ** p<0.01

Conclusion / Summary

- Striking disparities exist between rural and urban children in all major domains of development: physical health, psychological and social wellbeing, schooling and cognitive ability.
- Major risk factors: poor community and family economic conditions and education resources, low family involvement in child development, low parental education and less positive parenting style and practice.
- Policy implications: increase government investment in rural health care and educational resources, raise awareness and skills of rural caregivers about positive parenting practice.

Limitations and Further Research

- Some indicators may not be accurate: BMI and low birthweight based on caregiver reports instead of onsite measurements.
- Important outcomes lacking: child problem behavior, victimization.
- Major context variables lacking: school info like class size, amenities, teacher qualification; family functioning like domestic violence.
- Future research: Use longitudinal data analysis methods to understand the short and long term effect of parental absence and parenting practice on development outcomes.

Thanks for Attending!

- Thanks for attending, your suggestions and comments will be appreciated.
- Full report can be downloaded at:
www.chapinhall.org/research/report/report-state-children-china
- Contact info:
Lijun Chen, senior researcher
lchen@chapinhall.org