Play and Resilience: A China-Africa Collaboration Project for Building a Peaceful and Sustainable Future

Progress Report in China

Li Zhang
East China Normal University
June 29th, 2018
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Research Background

• Resilience is the ability to overcome serious hardship.
• It’s important to reduce the effects of adversity on children’s development.

• Left-behind children are a large group of children who stay apart from their parents and usually encounter with adversity, including social-emotional or psychological problems. At the same time, another large group of children who migrate with their parents in large cities, called as migrant children are also faced with problems.
Figure 1  Number of Left-behind Children and Migrant Children in 2005 and 2010 (Unit: Million) (All-China Women’s Federation, 2013)
The number of left-behind children in Sichuan, Anhui, Henan, Guangdong, Hunan and Jiangxi Provinces accounts for 52% of left-behind children throughout China.

Almost 50% of the migrant children are from Henan, Shandong, Jiangsu, Zhejiang, Fujian, Sichuan, Guangdong, Beijing and Shanghai.

The top ten provinces that have most left-behind children also include Guangxi, Hubei, Guizhou and Jiangsu.
The proportion of left-behind children in various school in the total number of left-behind children of Guangxi in 2017.

- Kindergarten: 33,390 (31.21%)
- Primary school: 56,960 (53.23%)
- Junior middle school: 16,640 (15.55%)
The Districts that include the most migrant population

Shanghai is composed of 15 districts and 1 county. In 2015, there were nearly 24.15 million people in Shanghai and about 9.82 million were migrant people. They mainly stay in Pudong, Minhang, Jiading, Baoshan, Qingpu and Fengxian.

Source of data: 2016 Shanghai Statistics
The percentage of migrant children in Shanghai

Fig. The Percentage of Migrant Children for Each Age Group

Source of Data: Report of Shanghai Statistics Bureau
The Percentage of Migrant Children in Shanghai

Fig. The percentage of migrant children among all children of different age groups

Source of Data: Report of Shanghai Statistics Bureau
• Thus, it is essential to examine the development of resilience in these children to provide important implications on their early development and education.
Project Design and Objectives

1. Exchange ideas with African team
2. Share our intervention project (activities, teaching materials, educational tools etc.) with African team
3. Provide educational consultancy
Baseline Assessment and the Results
Research Design

Guilin

Left-behind children
Two counties
10 Kindergartens

Two districts (Q & J)
5 Kindergartens

Migrant children

The People’s Republic of China and the Republic of China both claim the Paracel and Spratly Islands, not shown on this map. The PRC controls the Paracels (also claimed by Vietnam), while the Spratlys are disputed among several neighbouring countries.
Participants (Left-behind group)

Originally 269 Left-behind children

Finally 244 Remove children <36 m and > 60m

Randomly select 1 K1 class and 1 K2 class and then select all the left-behind children in the target classes (6-26).

<table>
<thead>
<tr>
<th></th>
<th>K1 (3-4yrs)</th>
<th>K2 (4-5 yrs)</th>
<th>Mean age: 47.77 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>boys</td>
<td>58</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>girls</td>
<td>59</td>
<td>58</td>
<td></td>
</tr>
</tbody>
</table>
Participants (Migrant group)

Randomly select 2-3 K1 class and 2-3 K2 class and then select the migrant children in the target classes (12-18).

<table>
<thead>
<tr>
<th></th>
<th>K1 (3-4 yrs)</th>
<th>K2 (4-5 yrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Migrant Boys</td>
<td>45</td>
<td>42</td>
</tr>
<tr>
<td>171 Girls</td>
<td>38</td>
<td>46</td>
</tr>
<tr>
<td>Local Boys</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>124 Girls</td>
<td>31</td>
<td>31</td>
</tr>
</tbody>
</table>

Shanghai

Q District

3 Kgs Migrant children

J District

2 Kgs Local children
Methods and Measures

2. Resilience

Child Assessment by assessors
30 items,
Play-based assessment for self-regulation

Teacher observation and report
38 items,
The frequency of specific behaviors,
Assesses:
1. Initiative (IN)
2. Self-regulation (SR)
3. Attachment/Relationships (A/R)
4. Behavioral Concerns (BC)

3. Child Development

Child Interview
6 items,
Self-concept on peer relationship

Child Assessment by assessors
38 items,
ypical Early Child Development Scales

Picture Book

1. Parent Questionnaire

Devereux Early Childhood Assessment for Preschoolers
Second Edition (DECA-P2)
(for children ages 3 through 5 years)

Paul A. LeBuffe  Jack A. Naglieri

Child Assessment by assessors

Early Childhood Development
in four domains: Cognitive, social-emotional, language, and approaches to learning
Resilience

Control

DECA-SR, BR HTKS

DECA-IN

Competence

Peer relationship DECA-AR

Connection
Results 1: Family Demographics

- **mixed**
  - left-behind children in Guangxi
  - migrant children in Shanghai
  - Shanghai local

- **grandparents**
  - left-behind children in Guangxi
  - migrant children in Shanghai
  - Shanghai local

- **parents**
  - left-behind children in Guangxi
  - migrant children in Shanghai
  - Shanghai local

Children’s main caregiver
Significant difference in family SES

Ownership of TV, computer, car et al.

- Shanghai local
- Migrant children in Shanghai
- Left-behind children in Guangxi
Disadvantaged children are more likely to suffer from breaking life events.
Results 2: Resilience of children
Results: Resilience of children (protective factors: A sum of IN, BR and AR)

Controlling for child gender, age, and family SES
Self-regulation

- Shanghai local
- Migrant children in Shanghai
- Left-behind children in Guangxi
Results 3: The interaction of age and group of children on child resilience

![Graph showing estimated marginal means of ECDA_protective for different child groups.](image-url)
After controlling for child age and gender, family life events and family SES, behavioral regulation and peer relationship were strong predictors for cognitive development (CD) and resilience accounted for 19% of the total variance of CD.
2. Social-emotional development

<table>
<thead>
<tr>
<th>Predictors</th>
<th>( \beta )</th>
<th>( t )</th>
<th>F</th>
<th>Adjusted ( R^2 )</th>
<th>( \Delta R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The first step</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.06</td>
<td>3.37***</td>
<td>.67</td>
<td>-.01</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.02</td>
<td>.37</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family SES</td>
<td>-.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family life event</td>
<td>-.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>The second step</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DECA_BC</td>
<td>.08</td>
<td>.87</td>
<td>5.74***</td>
<td>.20</td>
<td>.23***</td>
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<tr>
<td>DECA_IN</td>
<td>.08</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>DECA_SR</td>
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<td>.32</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>DECA_AR</td>
<td>-.05</td>
<td>-.53</td>
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<td></td>
<td></td>
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<tr>
<td>HTKS</td>
<td>.38</td>
<td>4.43***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peer relationship</td>
<td>.33</td>
<td>4.33***</td>
<td></td>
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</table>

After controlling for child age and gender, family SES and family life events, children’s behavioral regulation and peer relationship were strong predictors for social-emotional development (SED), and resilience accounted for 23% of the total variance of SED.
3. Language development

<table>
<thead>
<tr>
<th>Predictors</th>
<th>β</th>
<th>t</th>
<th>F</th>
<th>Adjusted R²</th>
<th>ΔR²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The first step</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.25</td>
<td>3.08***</td>
<td>8.03***</td>
<td>.16</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.00</td>
<td>-0.04</td>
<td></td>
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<td></td>
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<tr>
<td>Family SES</td>
<td>.05</td>
<td>0.74</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Family life events</td>
<td>.02</td>
<td>0.28</td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>The second step</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>DECA_BC</td>
<td>.03</td>
<td>0.32</td>
<td>6.53***</td>
<td>.27</td>
<td>.14***</td>
</tr>
<tr>
<td>DECA_IN</td>
<td>.01</td>
<td>0.09</td>
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<td></td>
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<tr>
<td>DECA_SR</td>
<td>.11</td>
<td>1.08</td>
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<tr>
<td>DECA_AR</td>
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<td>-0.53</td>
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<tr>
<td>HTKS</td>
<td>.36</td>
<td>4.59***</td>
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<tr>
<td>Peer relationship</td>
<td>.09</td>
<td>1.31</td>
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</tbody>
</table>

After controlling for child age and gender, children’s behavioral regulation was a strong predictor for language development (LD), and resilience accounted for 14% of the total variance of LD.
Conclusions and Implications

Conclusions:
• The study showed that left-behind children showed the poorest performance in almost all aspects of resilience.
• The development of resilience differed by age.
• Children’s behavioral regulation, peer are strong predictors for early childhood development.

Implications:
• It is important for parents and teachers to foster different aspects of resilience of these disadvantaged children in early years, especially self-control or self-regulation.
Educational Intervention: The Next Step

• Educational Intervention for children: Play-based learning activity revolving around specific picture books.

• Topics of the books:
  Self-control and self-management; Confidence; Peer relationship...
Educational Intervention

- Play-based activities for children
- Educational Training
  - Parent workshop
  - Teacher training
What we are doing?

- Research scholar
- Graduate students
- Kindergarten teachers
- Education Researchers
<table>
<thead>
<tr>
<th>主题</th>
<th>绘本</th>
<th>内容</th>
<th>评估与建议（适合年龄：易于理解程度打分 1-5 分，越高越容易理解；建议）</th>
</tr>
</thead>
<tbody>
<tr>
<td>有教师 1 克丽桑丝美美菊花</td>
<td>她在教师、家人的帮助下认可自己充满家人赋予的爱的名字；</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 点</td>
<td>教师鼓励声称不会画画的瓦斯蒂画一个点并装裱起来给瓦斯蒂信心去创作，最后瓦斯蒂也帮助了别人；</td>
<td></td>
<td></td>
</tr>
<tr>
<td>朋友 3 阿莫的生日日</td>
<td>大家一起去看望生病的阿莫；</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 拔萝卜</td>
<td>大家合作大丰收；</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 艾玛找回绒毛熊</td>
<td>理解别人丢掉心爱玩具的心情并去帮助而且感到开心；</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 彩虹鱼迷路了</td>
<td>彩虹鱼在海底小伙伴帮助下找到回家的路；</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 艾玛和蝴蝶</td>
<td>艾玛帮助蝴蝶，有一条蝴蝶也救了掉在悬崖下的艾玛；</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 月亮的味道</td>
<td>动物们都想知道月亮的味道，最后大家桑罗汉吃到了美味的月亮；</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
歪歪兔迟到了
时间管理
歪歪兔关键期早教项目组/著绘
Educational intervention for children

- Collective teaching
- Role-play
- Picture book reading
- Play activity in a group (Simon says)
Thanks for your listening!