The Influence of G3 Family on Kindergarten Children’s Academic Performance in China

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Abstract. Co-resident grandparenting is a common phenomenon in China since Confucianism. The current study aiming to examine whether co-resident grandparents (G3 family) have influence on kindergarten children’s academic performance in China. The Classroom Observation Scale (Chesterfield, 2009) was applied in this study. Eighty-eight students from five classes were recruited to this study from a kindergarten in a medium sized city located in east coast of China. The participants were first year students with mixed gender and the age range were from two to three years old. Finding showed that co-resident grandparents made great influence on their grandchildren’s academic performance.

Introduction

Co-resident grandparenting has been proposed and studied for 40 years since 1970s (Irving, 1979; Tsuya & Martin, 1992; Thompson, Entwisle, & Alexander, 1992; Logan & Bian, 1998; Kamo, 2000; Chian & Lin, 2015).

There has been research and explorations on co-resident grandparents, such as the relationship between co-resident grandparents and grandchildren (Vivian 2013), and the influence of co-resident grandparents on children’s mental health development (Kreidl, Martin, & Babara, 2014). However, there was very few research studies focused on Chinese kindergarten children. Moreover, because of the high G3 family rate China has. This is an important question, thus it is necessary to conduct a research focus on the influence of co-resident grandparents on Chinese children. However, researchers seldom made connection with children’s class engagement and the influence of co-resident grandparents. In consideration of that, the present research is explored the influence of co-resident grandparents on kindergarten children’s classroom engagement based on a Classroom Engagement Scale (Chesterfield, 2009).

There will be significant relationship between classroom engagement level and G2/G3 family.

Participants

200 invitation-letters were distributed to five classes in a medium-sized city’s kindergarten located in east coast of China. Ninety-eight children volunteered to take part in this study, but one child quit the second time of the after-school program. Among the eighty-eight kindergarten students (fifty males and forty-seven females), there were thirty-nine students live with their co-resident grandparents (G3 family) and forty-nine students live with just their parents (G2 family). All participants are first year students aged two to three years old.

Observation Instrument

The classroom engagement scale (Chesterfield, 2009) was applied in this study. Eight observation items were listed in this classroom observation instrument including group learning, critical thinking, question asking, talking with teacher, learner response, independent study, task complete and classroom rules. A four-point scale was used for every item and observers need to measure students’
engagement level according to this instrument. The number “1” means the worst classroom engagement behavior and the number “4” means the best classroom engagement behavior. For example, “1” means learner answered no question, and “4” means learner asked questions which showed creative thinking even without teacher’s encouragement.

Results

Hypothesis The influence of family types on children’s academic behavior.

Before analyzing the relationship between co-resident grandparents and students’ classroom engagement, a MANCOVA was conducted to examine the relationship between family type and classroom engagement, children’s age, gender, parents’ job and income were set as co-variance. As showed in Table 1, a significant relationship was discovered between family type and group learning. G2 family’s children and G3 family’s children have a significant difference in dimensions. \( F (1, 93) = 13.688, p < .01 \). The average classroom engagement level of G2 and G3 family indicated that G3 family (M = 2.9) has higher group learning score than G2 family (M = 2.3) (See Fig.1). Moreover, there is a significant relationship between Critical thinking \( F (1, 93) = 142.061, p < .01 \) and family type. The average classroom engagement level of G2 and G3 families indicated that G3 families (M = 2.9) had higher group learning score than G2 family (M = 2.3) (See Fig.1).

Table 1. Mean, Standard Deviations, and Correlations of Classroom Engagement and Family Type (N=97).

<table>
<thead>
<tr>
<th>Instructional Setting</th>
<th>M (SD)</th>
<th>G2</th>
<th>G3</th>
<th>F (1, 93)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Learning</td>
<td>2.3(.76)</td>
<td>2.9(.63)</td>
<td>13.688</td>
<td>&lt;. 01**</td>
<td></td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>2.0(.76)</td>
<td>3.1(.89)</td>
<td>42.061</td>
<td>&lt; .01**</td>
<td></td>
</tr>
<tr>
<td>Question Asking</td>
<td>1.8(.67)</td>
<td>2.9(.58)</td>
<td>63.029</td>
<td>&lt; .01**</td>
<td></td>
</tr>
<tr>
<td>Talk with Teacher</td>
<td>2.0(.69)</td>
<td>3.0(.64)</td>
<td>40.472</td>
<td>&lt; .01**</td>
<td></td>
</tr>
<tr>
<td>Learner response</td>
<td>2.6(.91)</td>
<td>2.5(1.06)</td>
<td>.017</td>
<td>.897</td>
<td></td>
</tr>
<tr>
<td>Independent study</td>
<td>2.4(9.0)</td>
<td>2.7(.69)</td>
<td>.966</td>
<td>.328</td>
<td></td>
</tr>
<tr>
<td>Task complete</td>
<td>2.1(1.10)</td>
<td>2.3(.76)</td>
<td>.240</td>
<td>.625</td>
<td></td>
</tr>
<tr>
<td>Classroom rules</td>
<td>3.38(.70)</td>
<td>1.8(.72)</td>
<td>112.536</td>
<td>&lt; .01**</td>
<td></td>
</tr>
</tbody>
</table>

Note. *p< .05 **p< .01

The result of the multiple analysis of covariance showed question asking has significant relationship with family types \( F (1, 93) = 63.029, p < .01 \). Fig.1 showed that student from G3 family (M = 2.9) has better classroom engagement than children from G2 families (M = 1.8). What’s more, as showed in Table 1, G2 families’ children and G3 families; children have significant difference with talking with teacher \( F (1, 93) = 40.472, p < .01 \). The average classroom engagement level of G2 and G3 families indicated that G3 families (M = 3.0) has higher group learning score than G2 family
(M = 2.0) (See Fig.1). Since the relationships were found between some parts of classroom engagement and family types, Hypothesis 1 was partly supported. However, although significant correlation were founded within classroom rules and family types $F(1, 93) = 112.536, p < .01$ (see Table 1), G3 family children’s (M = 1.8) showed a lower score compared with G2 family children (M =3.38) (See Fig.1).

![Average classroom engagement level of G2 and G3 family](image)

Figure 1. Average classroom engagement level of G1 and G2 family (N= 97).

**Conclusion**

The present research provided a way to better understand Chinese kindergarten children’s family type and its relationship with the classroom engagement and parents’ job, family income and other family background. Overall, the results of this study revealed that Chinese kindergarten children’s family type was statistically significantly related to their academic performance. It contributes to help parents choose the best family education approach to improve students’ classroom engagement based on different family types. What’s more, it would provide theoretical and data support to teacher to arrange different teaching methods to improve their teaching effectiveness.

**Reference**