After-School Activities of Japanese Elementary School Children: Comparison of Children Who Attend Lessons and Cram Schools With Those Who Do Not

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Background: This study examined the after-school activities of Japanese elementary school children in which little information is available for understanding the process by which participation in organized activities leads to the decrease in children’s independent mobility. Methods: One thousand eight hundred and twenty-four mothers of elementary school children participated in an online survey. The mothers responded to the questions on the number of lessons (or cram schools) their children attended weekdays, as well as their children’s behavior after classes, and parents providing transportation when their children go out to play. Results: The proportion of children attending lessons and/or cram schools increased as their grades progressed. A significant interaction existed between the degree of parental transportation and grade in terms of whether or not the children attended lessons and/or cram schools. Parental involvement included pick up or drop-off for a large percentage of younger children without lessons, whereas the degree of parental involvement was greater for older children attending lessons. In other words, parents of children without attending lessons or cram schools tended to allow children to engage in independent activities when they reached the higher grades, whereas parents of children who frequently attended lessons and cram schools tended to remain involved in transporting their children, even when they reached the higher grades. Conclusions: The results suggested that the participation of children in organized activities leads to a routine of parental pickup and/or drop-off, which renders difficult the facilitation of opportunities for children to independently participate in play activities.

Keywords: child, outdoor play, participation in organized activities, parental transportation

Children’s independent mobility (CIM) is referred to as children going out without an adult, and parents allowing it. Scholars propose that CIM progressively advances with development, and many studies are conducted on children aged approximately 8 years and older. Moreover, various factors are well known to be associated with the extent to which CIM is approved and those values specific to a society or culture, as well as negotiation between parents and children along these values, generate compromise, which also changes over time. Moore classified the outdoor activities of children into 3 categories, namely, habitual range (encompasses readily accessible neighborhoods near the home); frequent range (includes places further away from home, which, although not always accessible); and occasional range (constitutes places that are occasionally accessible to children and are beyond walking distance). The author also pointed out that children become progressively increasingly exposed to the local community as they expand their sphere of activities in this manner and that these experiences lead to independence and self-confidence.

Numerous studies reported on factors that influence CIM. Although the results frequently confirmed that children become more active with the increase in grade level, other scholars demonstrated the effects of gender, birth order, regional categories, distance from home to school, and parental perceptions of neighborhood security. However, it has been said that since the 1990s, CIM as a whole has been declining sharply, especially in developed countries. For example, Pooley et al. identified the factors that underlie the limitation of the outdoor activities of children as follows: (1) a motorized society due to the increased use of automobiles for transportation, (2) greater distance from school in general, (3) an accelerated pace of life which has resulted in fewer hours spent engaging in various activities, and (4) increased concern about danger, especially crime. Scholars repeatedly pointed out that the decline in CIM is particularly linked to concerns about traffic accidents as well as the fear of parents about children being involved in crimes. In many regions, accompanying children even to and from school is common for adults, who are typically their parents.

Furthermore, recent studies have increasingly highlighted children’s participation in organized and structured activities, such as lessons, in relation to the decline in CIM. A few reports suggested that participation in these organized activities frequently relied on parents for transportation, which hindered the unfettered activity of children. Other studies reported that more time spent engaged in organized activities at an early age resulted in a decrease in time for free play. In North America, the amount of time children spend in unrestricted play has been drastically reduced, replaced by an increasing number of organized and structured activities such as lessons and sports clubs. Kojima comprehensively examined the factors related to CIM among Japanese elementary school children and found that even after controlling for the effects of grade, gender, and birth order, as well as bicycle use, and cellphone ownership, the impact of lessons remained. In other words, the more days the child attended lessons, the more likely the child obtained a low CIM. The Benesse Institute for Educational Research, one of the largest organizations in the education sector in Japan, conducted a predominantly urban-based study and found that approximately 30% of children aged 3 years,
and more than 80% of children aged 6 years attend various kinds of after-school lessons. Once again, although the data were obtained from an urban area, scholars reported that 35.5% of children in grades 1 to 3 attend lessons at least 3 days per week, and that children in grades 4 to 6 are more likely to concentrate on indoor games on days when they have lessons. Ishihama et al examined the after-school activities of children aged 8–12 years and cited that they most frequently reported playing on digital devices, and those who opted for digital devices were more likely to attend cram school and less likely to play outside.

On the other hand, it has been pointed out that the increase in organized activities leads to parental involvement in their children’s extracurricular activities in general. Since playtimes take place in-between lessons, parents are forced to be involved in managing the schedule, and picking up, and dropping off their children, and Katz refers to such children as “overscheduled children.” Since it is difficult for children to arrange time for play unless taking advantage of intervals between activities such as lessons, parents inevitably have to be involved in managing their children’s schedules and transporting them to and from such activities, which Katz refers to as an “overscheduled child.” Related to this, Nordbakke notes that children who participate in organized activities are less likely to participate in activities without adult supervision, suggesting a close association between organized activities and CIM.

Thus, the current study intends to collect data with a focus on the actual movements of children after school to obtain a more extensive understanding of the mechanism of how and why attending lessons and/or cram schools may lead to low levels of CIM. The hypothesis is that, when comparing children who actively participate in lessons and those who do not, parents of the former may be more highly committed to their children’s activities in general. According to previous studies, it is common for parents to transport their children to and from organized activities, and they are even referred to as “chauffeurs.” In this study, it is predicted that even in situations other than lessons, specifically in children’s play activities, parents of children who participate more frequently in lessons are more involved in transporting their children around, which may result in limitation of their children’s independent activities. Among the various places where children hang out after school, scholars cite parks as the major destination in Japan, followed by friends’ houses. Therefore, we focused on neighborhood parks and friends’ houses and analyzed whether or not parents accompany their children to and from these places.

Finally, the majority of CIM studies are overwhelmingly biased toward Europe, the United States, and Oceania, such that very few data are available for Japan and other Asian countries. A common knowledge is that Japanese children are relatively active compared with those in other countries with respect to after-school activities, next only to Nordic countries such as Finland. The present study is one of the data on CIM in Asia, and the Japanese data are valuable for understanding the relationship and mechanism between participation in organized activities such as lessons and the decline in CIM.

Methods

Participants and Procedure

An online research company conducted a self-administered survey to its monitors (N = 2100). The participants were nuclear families consisting of parents and children with at least one child in elementary school, and the respondents were the mothers. Mothers were chosen as respondents because 44.0% of them were housewives and 33.9% worked part time, and hence were assumed to have a better understanding of their children’s activities than fathers. If a family had 2 or more children in elementary school, then the mother was required to answer in relation to the eldest child. The study recruited a nearly equal number of boys and girls. In online surveys, the existence of dishonest respondents or survey satisifying is a problem in terms of the reliability of data. Thus, the current study included several filler items in accordance with Miura and Kobayashi; for example, one of the instructions is to provide 4 responses to a particular question.

A total of 193 participants who did not respond appropriately to the filler items were initially excluded from the analysis. Subsequently, parents who consistently were unable to match the birth month of the child with the school year and those who answered each question using one value on the scale were excluded from analysis (n = 10, 55, respectively). Furthermore, when the child of interest was a twin, this was also excluded from the analysis (n = 18) since it was not possible to determine which child the respondent had in mind when answering the questions. The final analysis comprised data from 1824 respondents (Figure 1). The average number of responses for each grade was 304, which ranged from 285 in grade 1 to 321 in grade 3. The results further revealed that 400 are an only child, 939 are first-born children with younger siblings, and 485 second or subsequent children. The average ages of the mothers and fathers were 39.12 and 41.31 years, respectively. Other detailed attributes of the subjects are given elsewhere.

Measures

Frequency of Lessons and/or Cram School

The respondents were asked and provided the number of lessons (or cram schools) their children attended on all days of the week.

After-Class Activities

The respondents rated the frequency of occurrence of 3 types of behavior after classes, namely, going home immediately after school; participating in extracurricular activities at school, then going home; and going to an after-school care facility, then going home. The respondents were asked to note the time that they returned home.

Frequencies of Going Out to Play After Returning Home and Parental Transportation

The parents responded to the frequency with which children went out to play at a friend’s house or a neighborhood park after returning home from school within the past month. Four responses were offered (1 = never, 2 = not very often, 3 = sometimes, and 4 = often). In addition, to understand the time when classes end, only parents who responded sometimes or often to the behavior “going home immediately after school” were asked to note the time that they returned home.

(Ahead of Print)
the child returns alone” (parent → child), and “the parents transport the child to and from there” (parent → parent).

### Statistical Analyses

The frequency of attending lessons (or cram school) was analyzed using a chi-square test for weekdays and weekends, respectively, to determine between-grade differences. For children’s after-school activities (“going home immediately after school,” “participating in extracurricular activities at school, then going home,” and “going to an after-school care facility, then going home with a parent who came to pick up him/her”), the chi-square test was conducted to examine the differences between grades in each of the 3 categories. The time of going home after school was divided into 3 categories (“before 3 PM,” “3–4 PM” and “after 4 PM”), and differences between grades were examined by the chi-square test. Furthermore, the frequency of children going out to play after returning home from school on weekdays was examined using the chi-square test. All statistical analyses were performed with HAD, which is a free software program with various functions. Although this software has not been available for very long, it has recently been used for data analysis in various fields.

### Ethics Approval and Consent to Participate

The author obtained approval from the Ethical Review Committee of the author’s institution prior to conducting the study (Approval ID: Rinsin 18-014). All participants provided informed consent online prior to commencing the online survey.

### Results

#### Frequency of Lessons and/or Cram School

Table 1 indicates the number of children per grade who attended lessons (or cram schools) on weekdays and on weekends. The number of days attended was divided into 4 categories for weekdays: “0” (no attendance) and “1,” “2,” “3 or more” and for weekends: “0” (no attendance) and “1” (Saturday or Sunday) and “2” (Saturday and Sunday). The results demonstrated that the number of days was significantly different according to grade for weekdays and weekends, \( \chi^2(15) = 25.747, P = .041, \) Cramer \( V = .069; \) and \( \chi^2(10) = 57.628, P = .000, \) Cramer \( V = .126, \) respectively. Residual analysis indicates that the frequency of “0 days” was higher among first-grade students for weekdays and weekends (39.6% and 70.2%, respectively) and that of “3 or more days per week” was higher among the fifth- and sixth-grade students for...
weekdays and weekends (fifth grade: 30.4% and sixth grade: 30.1%). In addition, more sixth-grade students attended lessons (or cram schools) on Saturdays and Sundays (23.6%).

After-Class Activities

Analysis was conducted on the behavior of children after classes on weekdays (Table 2). The study found significant differences in grades for “going home immediately after school,” “participating in extracurricular activities at school, then going home,” and “going to an after-school care facility, then going home with a parent who came to pick up him/her,” $\chi^2(15) = 110.176, P = .000$, Cramer $V = .142$; $\chi^2(15) = 101.963, P = .000$, Cramer $V = .137$; and $\chi^2(15) = 90.676, P = .000$, Cramer $V = .129$, respectively. Residual analysis indicated that the most frequent responses for “going home immediately,” was never (not very often) for children in the first grade (never: 19.3% and not very often: 9.5%) and not very often for children in the second grade (7.6%). In addition, the most common response to the same behavior is often for third-, fifth-, and sixth-grade students (79.8%, 79.7%, and 82.8%, respectively). Moreover, the most prevalent responses to “participating in extracurricular activities at school,” were never for the first through third grades (84.2%, 84.8%, and 84.4%, respectively), sometimes for the fourth grade (15.0%), often (sometimes) for the fifth grade (often: 9.5%, sometimes: 20.9%), and not very often and frequently for the sixth grade (11.1% and 8.4%, respectively). In terms of “going to an after-school care facility,” the most frequent responses were often (sometimes; often: 15.8% and sometimes: 8.8%) and never for children in the first and fifth/sixth grades (90.5% and 91.2%, respectively).

Time of Going Home Immediately After Class

Table 3 points to a significant difference in the time of returning home immediately after classes among the grades, $\chi^2(10) = 336.453, P = .000$, Cramer $V = .316$, and residual analysis denotes that going home “before 3 PM” was more common for children in grades 1 and 2 (51.7% and 53.5%, respectively), and going home at “3 to 4 pm”, and “after 4 pm” is significantly more common for children in grade 6 (54.3% and 32.9%, respectively).

Frequencies of Going Out to Play After Returning Home and Parental Transportation

The frequency of children going out to play after coming home from school on weekdays varied according to grade (Table 4) $\chi^2(15) = 39.715, P = .001$, Cramer $V = .085$, in which the most common responses were never (not very often) for the first grade (never: 36.8%, not very often: 21.4%) and frequently for the fifth grade (18.0%). Furthermore, in terms of the frequency of children going out to play, the study compared among grades with respect to differences in the frequency of lessons (or cram schools). In the majority of the grades, the study found no significant relationship between the frequencies of lessons (or cram schools) and going out to play after coming home from school. However, a significant difference existed only for the third grade, $\chi^2(9) = 17.106, P = .047$, Cramer $V = .133$, which indicates that more children who did not take lessons never went out to play (13.7%), whereas those who took lessons (or cram schools) twice per week sometimes did so (10.6%).

Table 5 depicts whether parents transport their children when they go out to play, which was examined by dividing by the frequency of lessons (or cram schools). All categories, except for “the child goes and returns alone (child → child),” were classified as parental involvement because the parents were involved in one (or both) of the transportation directions. The results revealed no significant differences for any of the grades. However, when examining the differences between the lower (grades 1–3) and upper (grades 4–6) grades, the study noted that parental involvement sharply decreased for children in the upper grades who did not attend lessons (or cram schools). Alternatively, the study did not observe a remarkable decrease for children who attended lessons (or cram schools). Therefore, we examined the relationship between the frequency of lessons (or cram schools) and parental involvement in terms of transporting children to and from playing separately for the lower and upper grades (Figure 2). The results pointed to significant differences in the lower and upper grades, lower grades: $\chi^2(3) = 9.810, P = .020$, Cramer $V = .144$ and higher grades: $\chi^2(3) = 8.346, P = .039$, Cramer $V = .125$. Residual analysis revealed that parental involvement in transportation was greater for children in the lower grades who did not attend lessons (or cram schools) and less for children who attended lessons (or cram schools) for 3 days or more per week (38.0% and 19.4%, respectively). In contrast, parental involvement was less for children in the upper grades who did not attend lessons (or cram schools) and more for those who attended lessons (or cram schools) 3 or more days per week (5.8% and 16.0%, respectively).

Discussion

A number of studies across countries that investigated the extent to which children spend time by themselves and are unaccompanied by adults after school have been conducted. Although many studies have been primarily conducted in the western and Oceanian regions, a sufficient database remains lacking for other regions. According
First and second grades, are dropped off at an after-school care facility and then go home with their parents who picked them up. This scenario may be due to the earlier end of classes and the possibility that both parents are working, and no one is at home.

Alternatively, children in the higher grades typically finish classes 1 to 2 hours later than the lower graders; in addition, more of them participated in extracurricular activities before going home. Among the children in the sixth grade, a large number also very frequently participate in extracurricular activities, which suggests the tendency for them to be polarized into 2 groups, namely, those who participate and those who do not participate in extracurricular activities before going home. The frequency of attending lessons (or cram schools) increased with grade regardless of weekdays or weekends, and many children in the fifth and sixth grades attended them for 3 or more days on weekdays. In this regard, scholars recognize that many children in the upper grades of elementary schools in Japan attend cram schools in preparation for the entrance examination for junior high school. Thus, the study assumed that a certain number of children in the sixth grade limit their participation in extracurricular activities for this preparation and go home immediately to attend cram schools.

Next, when examining the frequency with which children go out to play after coming home from school, the results demonstrated a difference by grade in which this frequency is lower for children in the first grade. As previously mentioned, many children in the first grade attend after-school care facilities. In addition, parents of first-grade children, who have just entered school, tend to be more cautious about the children going to even familiar places such as a friend’s house or a neighborhood park.

Conversely, we expected that children in the higher grades would display a decreased frequency of outings to play, because their classes end later and more of them attended lessons (or cram schools), but this was not necessarily the case. Furthermore, the study found no association between the frequency of attending lessons and the occurrence of children going out to play with a few exceptions. This finding indicates that children who attend lessons also go out to play as frequently as children who do not attend them.

In contrast, the data on parental transportation to and from friends’ houses and neighborhood parks exhibited a significant interaction between whether the child attends lessons (or cram schools) and grade. Thus, the parental involvement of a large number of children in the lower grades without lessons included transportation to or from a play place, whereas the opposite is true for the parental involvement of children in the higher grades that participate in lessons. In other words, parents of children without lessons (or cram schools) became increasingly tolerant of their children going out to play when the children reached the upper grades. This tendency resulted in a shift toward approval of the independence of their children. Alternatively, parents of children with lessons (or cram schools) remained involved in transportation, even when their children reached the upper grades. Although whether children go out to play mostly before, or after, going to lessons (or cram schools) remains unclear based on the data, the study assumed that parents are closely involved in the transportation of their children to and from several places and that children tend to have fewer opportunities to move around independently. These tendencies are also common in other countries, and a number of researchers have described this type of lifestyle for children as insularization. Thus, the term derisively refers to parents as chauffeurs who transport their children from one island to another. In relation to this notion, Katz also points to an overscheduled child whose activities over time are controlled by the parents. In general, parental transportation and accommodation

### Table 3
<table>
<thead>
<tr>
<th>Grade</th>
<th>3 PM</th>
<th>4 PM</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>119</td>
<td>104</td>
</tr>
<tr>
<td>2</td>
<td>153</td>
<td>120</td>
</tr>
<tr>
<td>3</td>
<td>93</td>
<td>160</td>
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<tr>
<td>4</td>
<td>39</td>
<td>167</td>
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<tr>
<td>5</td>
<td>29</td>
<td>170</td>
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<tr>
<td>6</td>
<td>37</td>
<td>157</td>
</tr>
</tbody>
</table>

Note: Cells with significantly larger values as compared to the overall distribution by residual analysis are shown in bold.

### Table 4
<table>
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<tr>
<th>Grade</th>
<th>Never</th>
<th>Not very often</th>
<th>Sometimes</th>
<th>Often</th>
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<tbody>
<tr>
<td>1</td>
<td>105</td>
<td>61</td>
<td>96</td>
<td>23</td>
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<tr>
<td>2</td>
<td>83</td>
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<td>3</td>
<td>89</td>
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<td>138</td>
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</tr>
<tr>
<td>5</td>
<td>69</td>
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<td>55</td>
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<td>6</td>
<td>72</td>
<td>51</td>
<td>133</td>
<td>40</td>
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Note: Cells with significantly larger values as compared to the overall distribution by residual analysis are shown in bold.
<table>
<thead>
<tr>
<th>Number of days with lessons and/or cram school on weekdays</th>
<th>Parental involvement</th>
<th>Parental involvement</th>
<th>Parental involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grade 1</td>
<td>Grade 2</td>
<td>Grade 3</td>
</tr>
<tr>
<td></td>
<td>(Child → child)</td>
<td>(Child → parent)</td>
<td>(Parent → child)</td>
</tr>
<tr>
<td>0</td>
<td>21</td>
<td>28</td>
<td>39</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>33</td>
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</tr>
<tr>
<td>2</td>
<td>10</td>
<td>34</td>
<td>30</td>
</tr>
<tr>
<td>3 or more</td>
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<td>36</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grade 4</td>
<td>Grade 5</td>
<td>Grade 6</td>
</tr>
<tr>
<td></td>
<td>(Child → child)</td>
<td>(Child → parent)</td>
<td>(Parent → child)</td>
</tr>
<tr>
<td>0</td>
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<td>56</td>
<td>42</td>
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<tr>
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<tr>
<td>2</td>
<td>39</td>
<td>31</td>
<td>37</td>
</tr>
<tr>
<td>3 or more</td>
<td>37</td>
<td>46</td>
<td>38</td>
</tr>
</tbody>
</table>

In other regions and whether or not similar trends can be observed in other parts of the world. The Japanese observe a few unique arrangements, such as extracurricular activities at school and after-school care facilities, but the study expected that such arrangements also exist in other countries in a manner that is unique to their cultures. Thus, a further detailed examination and a cross-cultural comparison of the after-school activities of children while considering such social arrangements may contribute to further progress in this field in addition to recommendations for specific policies that support the development of children.

Notes

I. In Japan, the overwhelming number of extracurricular activities for elementary school students are typically conducted from fourth-grade onward.

II. After-school care facilities are places in which elementary school children whose parents are away from home during the day due to work or other reasons spend time after school. According to available data in 2019, when this study was conducted, approximately 25,000 after-school care facilities exist across the country with approximately 1,300,000 children using them.49

Acknowledgment

The author wishes to thank the mothers of the children in this study for their participation.

References


Figure 2 — Association between the number of days attending lessons (or cram schools) and parental transportation divided by grades.

Conclusion

As a background of the decrease in CIM, a growing stream of research has recently addressed the prevalence of organized activities; however, data on the process of the decrease in CIM remains insufficient. The current study investigated after-school activities of school-aged children in Japan; the time when children went home, their activities after returning home, and actual behaviors related to parental involvement through transportation and focused on the behavior of the children after classes. The results illustrated that the higher the frequency of lessons, the more the parents tended to routinely take their children to and from places for play, especially in the upper grade. Participation in organized activities increased parental involvement in their children’s overall daily schedules, suggesting that a decline in CIM may have occurred as a result of increased parental involvement in their children’s daily schedules. These findings have made a significant contribution to the field of CIM research.

Furthermore, this study is also valuable, because it presents data on CIM in the Asian region, particularly in Japan. In many fields of social science, scholars pointed out that the findings are concentrated on the WEIRD (western, educated, industrialized, rich, and democratic) countries. Thus, in recent years, the attention on the need to examine and accumulate data from other regions and to compare them with previous findings has increased. This case is also true for CIM studies. In this regard, the current study also extended the findings of previous research. Future studies are required to examine whether such underlying data can be obtained.


