Young Children's Responses to Social-Conventional Transgressions in Japanese Preschool Settings

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Abstract: This study investigated young children's recognition of social rules and responses to social-conventional transgressions in Japanese preschool settings. One hundred twenty-six children aged three to six years old heard four hypothetical stories that describe typical social-conventional transgressions in Japanese preschools. They were asked about their feelings when they witnessed each transgression (emotional response), whether they thought it was better to follow social rules and act like everyone else (social convention judgment), their justification for the judgment, and their willingness to play with the transgressor (interaction judgment). Most participants in all age groups valued following social rules and judged that the transgressor should act like everyone else, but five-year-olds generated more group- and other-oriented justifications for the judgment. Although there were no significant age group differences in interaction judgment, further analysis showed that three-year-olds' willingness to play with the transgressor was positively related to their positive emotion, whereas such relationships were not found in four- and five-year-olds. The results demonstrate that Japanese children's responses to social-conventional transgressions become more social and complex throughout young childhood in the Japanese cultural context.

Keywords: Preschool, social-conventional transgressions, social development, young children.


Introduction

In developed countries in modern society, most children experience group life as students. In Japan, the rates of participation in pre-primary education at three, four, and five years of age are 81%, 96%, and 96%, respectively (Organization for Economic Cooperation and Development [OECD], 2017). In Japanese early childhood education and care, developing an awareness of the importance and necessity of social rules and cultivating normative consciousness are valued. In preschool settings, various social rules exist that are unique to the local group, such as “stop playing and put away toys at the same time during clean-up time” and “eating school lunch after saying 'Thank you for the food Itadakimasu in Japanese' in class.”

Over the past 40 years, developmental psychological research on moral development has examined when and how children distinguish different types of transgressions in the domain of morality versus social convention (e.g., Nucci & Turiel, 1978; Smetana, 1981, 1985; Turiel, 1983; see Turiel, 2006 as a review; see also Hasegawa, 2014b; Shuto & Ninomiya, 2003). The domain of morality refers to concepts of welfare, justice, and rights, such as stealing and bullying (Turiel, 1989). Meanwhile, the domain of social convention refers to concepts of shared uniformities based on social organization and whose meanings are defined by the constituted system in which they are embedded, such as social habits and manners (Turiel, 1989).

The social rules children experience in preschool settings are in the domain of social convention. In contrast to moral transgressions, social-conventional transgressions are arbitrary, context-dependent, and changeable (e.g., Nucci, 1981). Violations of social rules are allowed where local rules do not exist. For example, some behaviors considered wrong because they violate social rules in preschool are permissible at home (e.g., starting to eat without waiting for others). Additionally, some behaviors may become allowed in the same place, although they were not allowed earlier, depending on the authority in the community (e.g., playing for a while after being told to clean up by the teacher). After children...
start group life in preschool settings, they must face the need to learn the flexible nature of social conventions, and not consider them as absolute rules.

An observational study conducted in preschools in the U.S. reported that responses to transgressions of conventional school regulations were made primarily by teachers; furthermore, teachers intervened in conventional transgressions by disorder statements, rule statements, or commands (Nucci & Turiel, 1978). In group life, young children are taught social conventions directly or indirectly during social interactions (i.e., socialization) through interventions in their own transgressions, witnessing interventions in peers’ transgressions, and social rules taught in class. Based on such social experiences, they may become aware of the nature of social conventions and learn appropriate behaviors in the local community.

Understanding the importance and necessity of social rules can lead to the exclusion of “heterogeneous others,” or those who deviate from the rules and act differently from the majority in the social group (Hasegawa, 2014b; Killen et al., 2002). Notably, understanding others from diverse backgrounds and cooperating with them are also valued in education in modern society internationally. “Interacting in heterogeneous groups” was identified as one of the key competencies in the OECD’s DeSeCo project (OECD, 2005), and this competency was recognized as consistently important in the subsequent Education 2030 project (OECD, 2019). Conflicts and dilemmas are expected as opportunities to interact with diverse individuals increase in today’s multicultural society. Therefore, “reconciling tensions and dilemmas” (OECD, 2019) and competence to cooperate with “heterogeneous others” are increasingly required to live in the coming age. Outside school settings, such as the home, parents’ consideration that “tolerance and respect for other people are important” has grown over the past 40 years in many countries, including Japan (Haerpfer et al., 2022; Inglehart et al., 2018).

However, fostering comprehensive competence to understand social rules and cooperate with “heterogeneous others” in child education at school and home is not an easy task. It is insufficient to merely convey social rules or instruct children to respect the thoughts and feelings of diverse others and get along with them; there is no single answer to which guidance should be given more weight. It is a difficult educational theme, but the inclusive view to capture developmental changes in children's recognition of social rules and responses to social-conventional transgressions may provide some clues that are needed to address this issue. We chose to study preschoolers because young childhood entails important developmental changes in recognizing social rules (e.g., Smetana & Yoo, 2022) and understanding others’ mind (e.g., Hughes, 2011).

Substantial research has already been devoted to moral development. However, as Banerjee et al. (2012) highlighted, “comparatively little is known about the psychological processes at work—the emotions, cognitions, and motivations—when conventional transgressions have taken place (p. 1807),” and more work is needed on this topic. Furthermore, children learn social rules and conventional styles within their cultural settings. To understand social development comprehensively and appropriately, it is also important to focus on the development of children in non-WERID (Western, Educated, Industrial, Rich, and Democratic) populations (Henrich et al., 2010).

The present study addressed two main questions regarding the development of young Japanese children’s responses to social-conventional transgressions in preschool settings, focusing on multidimensional responses, including emotional (i.e., emotional responses when they witnessed social-conventional transgressions), cognitive (i.e., recognition of the importance of social rules), and motivational (i.e., willingness to interact with the transgressor) ones. The first question involved what developmental change would occur in an emotional response, recognition of the importance of following social rules, and willingness to play with the transgressor during the preschool period. The second question was how recognizing the importance of social rules and emotional response relate to the willingness to play with the social-conventional transgressor.

Children acquire the concepts of good and bad regarding objects, events, actions, individuals, and the self in the third year of their lives (Kagan, 2005). Previous research found that most young Japanese children aged four to six recognized social-conventional transgressions as bad (Shuto & Ninomiya, 2003). Although Shuto and Ninomiya (2003) did not examine developmental changes in young childhood, another study with British children between four and nine years of age showed that children's ratings of the seriousness of social-conventional transgressions (i.e., how bad was it) were generally high, and declined with age (Banerjee et al., 2012). From these findings, we may infer that young Japanese children's recognition of the importance of social rules would generally be high but decreases with age (Hypothesis 1).

What should not be overlooked here is that, when children confront social-conventional transgressions, they not only make a judgment of right or wrong but also experience various feelings. Danovitch and Bloom (2009) demonstrated that six-year-olds felt moral disgust toward immoral behavior. More recent studies that assessed emotional responses to social-conventional transgressions revealed that children showed more negative emotional responses to moral transgressions than social-conventional transgressions (e.g., Hardecker et al., 2016; Yucel et al., 2020). As they mainly focused on the contrast to moral transgressions to investigate when children showed moral-conventional distinction, evidence for developmental change in emotional responses to social-conventional transgressions has been absent to date. Emotional responses to social-conventional transgressions can be diverse because they do not involve explicit harm or victims; hence, emotional responses vary depending on how the individual recognizes the transgression event. As
young children’s negative emotions, such as being sad or cross following social-conventional transgressions, declined with age (Banerjee et al., 2012), as well as their judgment regarding the seriousness of these transgressions, we expected that young Japanese children’s emotional response to social-conventional transgressions would decrease with age (Hypothesis 2).

Furthermore, recent developmental literature has shown evidence indicating that young children’s moral evaluations regarding wrongness are linked with preferences of the transgressor (e.g., Smetana et al., 2018; Van de Vondervoort & Hamlin, 2017). Therefore, we explored the association of young Japanese children’s evaluation of social-conventional transgressions (i.e., value regarding following social rules and emotional responses) with interaction judgment (i.e., willingness to play with transgressors). We expected that children who value following social rules more and feel more negative emotions toward social-conventional transgressions would want to play less with the transgressor (Hypothesis 3).

**Methodology**

**Research Design**

This study aimed to reveal young children’s recognition of social rules and how they respond to social-conventional transgressions in Japanese preschool settings. We conducted a cross-sectional study using face-to-face investigation at a preschool in Japan.

**Participants**

A total of 126 young Japanese children participated in this study. Thirty-seven children belonged to the three-year-old class (Mean age in months = 44.95, range = 39–50, SD = 3.15; 26 girls), 46 children belonged to the four-year-old class (Mean age in months = 55.41, range = 50–62, SD = 3.47; 34 girls), and 43 children belonged to the five-year-old class (Mean age in months = 68.12, range = 63–74, SD = 3.30; 31 girls) in a private preschool in Aichi-prefecture, Japan.

**Research Procedure**

The children were tested individually in a quiet room at their preschool between June and July 2022. They completed a newly developed Multicultural Inclusion Competence Task (preschooler version), which included four stories that involved typical social-conventional transgressions in Japanese preschool settings. Each story depicts a situation in which a child deviates from the social rule of preschool life, whereas others in the class follow the rule. A sample story is as follows: “It is time for school lunch. [Itadakimasu]”. However, only Mako-chan starts eating before saying, ‘Thank you for the food [Itadakimasu].’ The protagonist’s gender in the stories matched the participant’s gender. The four stories are given in Appendix 1.

The experimenter showed a color illustration of each situation and read the story to each child. An example of an illustration for the story about school lunch is presented in Appendix 2. The order of the stories was counterbalanced among the children. In each story, the children were asked three test questions: (Q1) Emotional response: “How do you feel when you see X (the protagonist’s name) doing Y (e.g., starting to eat first)? Do you feel happy, neutral, sad, or angry?” Children were shown a supplemental illustration of the four facial expressions and asked to select one. Children’s choices for each story were scored as 1 (positive, i.e., happy), 2 (neutral), and 3 (negative, i.e., sad, or angry). The total score of the four stories was computed to obtain a single score for emotional response (possible range: 4–12); (Q2) Social convention judgment: “Do you think X should do Z (e.g., wait to eat until he/she says ‘Thank you for the food [Itadakimasu]’)?” The protagonist’s gender in the stories matched the participant’s gender. The four stories are given in Appendix 1.

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Data Analysis

Children’s responses to the questions in the task were analyzed from the perspective of age group differences. As the preliminary analysis found no significant gender differences in their responses, gender was excluded from the main analysis. The preliminary analysis also found that extremely similar developmental changes were demonstrated when the data was analyzed for each story and all stories combined. Thus, we reported the results for the four stories combined.

First, a Kruskal–Wallis test was conducted for the scores of the three forced-choice questions (Q1–Q3) to assess age group differences. Subsequently, the justifications for Q2 (social convention judgment) were analyzed to explore developmental changes in the reasons for valuing social conventions. Finally, we explored the association between Q1 (emotional response) and Q3 (interaction judgment) choices for each age group. Apart from our third hypothesis, we did not examine the association between choices for Q2 (social convention judgment) and Q3 (interaction judgment) because the majority of children selected the same choice (i.e., valuing to follow social rules) for Q2, as reported in the next section. Data from children who completed all four stories were used for each question in the following main analysis.

Findings/Results

Age Group Differences in Children’s Choices to Each Question

Figure 1 shows the mean scores and standard deviations (SD) for emotional response (Q1) according to age group. Higher scores indicate more negative emotional responses. Since the assumption of normality was not satisfied, a Kruskal–Wallis test was conducted to compare the scores for Q1 across the three age groups. We observed a significant difference between the age groups, with $H(2) = 11.44, p = .003, \eta^2 = .098$. Post hoc comparisons using a Dunn-Bonferroni test revealed that five-year-olds were more likely to feel negative emotions than three-year-olds (three-year-olds and four-year-olds: $p = .224$; three-year-olds and five-year-olds: $p = .003$; four-year-olds and five-year-olds: $p = .069$).

![Figure 1. Mean Scores and Standard Deviations for Emotional Response by Age Group (Q1)](image)

Figure 2 shows the mean scores and SD for social convention judgment (Q2) according to age group. Higher scores indicate greater value for following social rules. Since the assumption of normality was not satisfied, a Kruskal–Wallis test was conducted to compare the scores for Q2 across the three age groups. We observed a significant difference between the age groups, with $H(2) = 21.32, p < .001, \eta^2 = .175$. However, post hoc comparisons using a Dunn-Bonferroni test revealed any significant difference between the age groups (three-year-olds and four-year-olds: $p = .241$; three-year-olds and five-year-olds: $p = .167$; four-year-olds and five-year-olds: $p = 1.000$). Most three-year-olds judged that the protagonist should follow social rules and act like everyone else. Additionally, all four- and five-year-olds selected choices for valuing social conventions.
Figure 2 shows the mean scores and SD for interaction judgment (Q3) according to age group. Higher scores indicate more willingness to play with the transgressor. Since the assumption of normality was not satisfied, a Kruskal–Wallis test was conducted to compare the scores for Q3 across the three age groups. The results did not reveal any significant difference between the age groups, with $H(2) = 1.13, p = .568, \eta^2 = .009$.

### Developmental Change in Justifications for Valuing Social Conventions

Most participants evaluated that the protagonist should follow social rules and act like everyone else for Q2 (social convention judgment). To explore the developmental change in the reasoning of the evaluation, their justifications regarding valuing social conventions (i.e., reasons to think that the protagonist should act like everyone else) were coded. A total of 490 responses to the justification question were classified into three categories: (a) group- and other-oriented, referring to social norms, impact on the group and others, or importance of acting like everyone else (e.g., “She has to say ‘Thank you for the food [Itadakimasu]’ with everyone,” “It is no good not to listen to the teacher,” “He will bother the teacher,” “He should do as everyone else does”); (b) transgressor-oriented, referring to the impact on the transgressor themselves (e.g., “If she runs around, she will bang her head,” “It is scary to play alone when the teacher is not around,” “He will get scolded by the teacher”); and (c) others, do not know, and no response. Two raters independently classified all justifications with high inter-rater reliability (Cohen’s kappa = .81). Disagreements were resolved by discussion.

### Table 1. Numbers and Proportions of Justifications for Valuing Social Conventions (Q2)

<table>
<thead>
<tr>
<th></th>
<th>Group-oriented</th>
<th>Transgressor-oriented</th>
<th>Others/Do not know/No response</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three-year-olds</td>
<td>29</td>
<td>43</td>
<td>63</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>21.48%</td>
<td>31.85%</td>
<td>46.67%</td>
<td>100.00%</td>
</tr>
<tr>
<td>Four-year-olds</td>
<td>46</td>
<td>86</td>
<td>51</td>
<td>183</td>
</tr>
<tr>
<td></td>
<td>25.14%</td>
<td>46.99%</td>
<td>27.87%</td>
<td>100.00%</td>
</tr>
<tr>
<td>Five-year-olds</td>
<td>83</td>
<td>70</td>
<td>19</td>
<td>172</td>
</tr>
<tr>
<td></td>
<td>48.26%</td>
<td>40.70%</td>
<td>11.05%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>
Table 1 shows the numbers and proportions of justifications for valuing social conventions according to age group. Three-year-olds were less likely to refer to group- and other-oriented reasons and transgressor-oriented reasons; approximately 50% of their responses were classified into the "others, do not know, and no response" category (46.67%). Four- and five-year-olds most frequently referred to transgressor-oriented reasons (46.99%) and group- and other-oriented reasons (48.26%), respectively.

**Association Between Emotional Response and Interaction Judgment**

Further analysis was conducted to investigate the developmental change in the association between emotional response and interaction judgment. Pearson's correlation tests were conducted to analyze the association between emotional response (Q1) and interaction judgment (Q3) in each age group. There was a significant correlation between these variables only in three-year-olds, \( r = .387, p = .024 \), whereas there were no significant correlations in four-year-olds and five-year-olds (\( r = .061, p = .705 \) for four-year-olds; \( r = .136, p = .392 \) for five-year-olds). Three-year-olds showed more willingness to play with the transgressor when they felt more positive emotions, but such associations were not found in older age groups.

**Discussion**

The present study examined young children's recognition of social rules and how they responded to social-conventional transgressions in Japanese preschool settings. Children heard four hypothetical stories describing typical social-conventional transgressions in Japanese preschools and were asked about their emotional response, social convention judgment and its reasons, and interaction judgment. We revealed developmental changes in young children's responses to "heterogeneous others" who violate social conventions, but most of our findings differed from our hypotheses derived from the findings of Western studies. Our results from Japanese samples might highly reflect the Japanese cultural context.

As expected, young Japanese children generally judged that the protagonist should follow social rules and act like everyone else. However, unlike the first hypothesis, no significant age group differences existed in social convention judgment. The tendency to value following social rules was very strong in all age groups and did not decrease with age. Regardless of age group, most children judged that the protagonist should follow social rules and act like everyone else. Although this result did not support the hypothesis derived based on the findings of a British study showing that children's ratings of the seriousness of social-conventional transgressions declined with age (Banerjee et al., 2012), it was consistent with the recent finding that young Japanese children are oriented toward performing the same behavior of ingroup members (Munakata et al., 2020). As the children in this study entered preschool in April at three and study data were collected between June and July, three-year-olds appear to place a high value on following social rules shortly after starting their group life at preschool. Given the view in cross-cultural psychology that Japanese people are more group-oriented than Western people (e.g., Markus & Kitayama, 1991), the strong tendency to value following social rules may be particularly pronounced in the Japanese school context, where teachers encourage children to emphasize interdependence and social harmony. Moreover, there were no age group differences in interaction judgment. Approximately 50% of the children in all age groups judged that they did not want to play with the transgressor, whereas the other 50% judged that they wanted to.

In contrast to the social convention judgment and interaction judgment, notable age group differences were observed for emotional response, but this time, the direction was in contrast with that of the second hypothesis. Younger three-year-olds were more likely to feel positive emotions than older five-year-olds. The results could indicate that as children get older, emotional responses to "heterogeneous others" shift from positive to negative, at least among Japanese children. Given that there were no age group differences in social convention judgment, those age group differences in emotional responses suggest that the recognition of social rules is initially superficial (i.e., perceived as something to be followed) but gradually becomes more internalized and accompanied by negative emotions.

This finding suggested that older preschoolers placed greater value on following social rules and acting like the majority in social groups than younger preschoolers in the Japanese cultural context. A previous observational study of three- to five-year-old Japanese children in a Japanese nursery school reported that deviations from social norms and behavioral standards in nursery school life often lead to peer rejection in the play-group entry situation (Aoi, 2000). Negative sanctions resulting from deviations from social rules (i.e., peer rejection) may make young Japanese children increasingly likely to value compliance with the social rules to avoid becoming “heterogeneous others.”

The exploration of justifications regarding the judgment of valuing social conventions found interesting age group differences, indicating that younger children recognized social-conventional transgressions as more personal issues, and older children recognized them as more group- and other-oriented issues. Three-year-olds showed difficulty explaining their reasons for the judgment in the first place. Four-year-olds were more likely to produce transgressor-oriented justifications related to the transgressor’s problems and disadvantages. Five-year-olds were more likely to produce group- and other-oriented justifications related to social rules or problems and disadvantages for other group members. Although group- and other-oriented justifications were produced in all age groups, the proportion was higher in the oldest group (21.48% for three-year-olds, 25.14% for four-year-olds, and 48.26% for five-year-olds).
The most notable finding of this study was that the association between emotional response and interaction judgment differed by age group. Our third hypothesis derived from Western studies (e.g., Smetana et al., 2018; Van de Vondervoort & Hamlin, 2017) was partly supported only in three-year-olds. Three-year-olds’ willingness to play with the transgressor was related to their emotional response when they witnessed social-conventional transgressions. The more three-year-olds felt positive emotion, the more they wanted to play with the transgressor. Such relationships were not found in four- or five-year-olds. It is suggested that the meaning of the same relationship building behavior differs depending on the children’s age. Older children may make interaction judgments based on something other than their emotions. Although we did not ask the children for justifications regarding Q3 (interaction judgment), some of them voluntarily explained their choices. For example, a five-year-old who felt “sad” explained, “I do not want to play with this child at all. She does not listen to the teacher, so I do not think she listens to me.” Another five-year-old who felt “sad” explained, “I want to play with this child very much, if he says, ‘I’m sorry.’” The latter justification suggests that young Japanese children would change their preference for the transgressor if an apology offered. An interesting future direction for research is to explore how young children’s evaluation of moral transgressions and social-conventional transgressions would change by apologizing. Moreover, these justifications suggest that the older the children, the more they consider what might subsequently happen in their social life when making judgments about how to get along with the transgressor instead of judging based on just their present feelings. This result supports previous findings that children aged approximately four and five years can think about uncertainties that may occur and become concerned about their future (Yoshida, 2011). Our study provides new evidence, suggesting that younger children with less developed future orientations make decisions about interacting with a transgressor based more simply on their feelings when they witness the social-conventional transgressions.

Conclusion

Overall, the results of this study showed that shortly after starting group life (i.e., three-year-olds), young children recognize that it is better to follow social rules and act like everyone else in Japanese preschool settings. This tendency to place value on following social rules did not decrease during the preschool period; rather, it seemed to increase because older children felt more negative emotions when they witnessed social-conventional transgressions. It was also found that reasons for social convention judgment and willingness to play with the transgressor became more social and complex throughout young childhood in the Japanese cultural context.

Recommendations

Our findings have important implications for education. A previous study found that Japanese elementary school children showed some tolerance for others who do not know social rules, such as foreign children, and judged that their social-conventional transgressions were acceptable (Shuto & Ninomiya, 2003). However, from the findings of this study, it appears that children value following social rules heavily in young childhood and do not voluntarily provide such conditional permission. Children meet “heterogeneous others” in their daily social life who do not behave conventionally. To foster competence to cooperate with “heterogeneous others” in early childhood education and care, adults need to consciously focus on the thoughts of “heterogeneous others” and carefully communicate them to children while considering the development of the children’s abilities to understand others’ mental states. An intervention study on the influence of teaching methods regarding “heterogeneous others” on young children’s tolerance is necessary to extend our findings.

Limitations

Between the ages of three and five, children develop their ability to understand mental states, i.e., theory-of-mind (Premack & Woodruff, 1978; Wellman et al., 2001). As their competence to understand others’ mental states matures, children may be able to consider the mental states of the transgressor behind the unique behavior, as well as the mental states of the teacher and class members who are affected by the transgressions. In this study, we did not assess children’s mental state understanding. It is thus important to examine the link between the reason for valuing social conventions and mental state understanding, in future research.

Furthermore, contrary to the previous finding from a British sample (Banerjee et al., 2012), our results showed that, regardless of age, young Japanese children heavily valued obedience toward social rules, and this tendency seemed to increase with age. We considered that this result reflects the Japanese cultural value, but empirical evidence should be provided. Future research is needed to clarify the determinants of cultural differences from a comparative cultural perspective.

Ethics Statements

This study was approved by the local ethics committee (No: 22-1722) and was conducted in accordance with the Code of Ethics and Conduct of the Japanese Psychological Association. We obtained informed written consent from the preschool principal in which the study was conducted, following a co-discussion regarding the ecological validity of the task’s scenario. We also obtained verbal assent from the participating children and written consent from their parents.
Acknowledgments
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Conflict of Interest
The authors declare that there are no conflicts of interest associated with this manuscript.

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Authorship Contribution Statement
Mizokawa: Conceptualization, methodology, investigation, analysis, writing -original draft, writing -review & editing.
Nakaya: Conceptualization, methodology, writing -review & editing, funding acquisition.
Nomura: Conceptualization, methodology, writing -review & editing.

References


Appendices

Appendix 1. Scenario of the Four Stories

School Lunch
This is the story of Mako-chan. It is time for school lunch. All the children are waiting to eat their food until they say, “Thank you for the food [Itadakimasu].” However, only Mako-chan starts eating before saying, “Thank you for the food [Itadakimasu].”

Cleanup Time
This is the story of Hiro-chan. As playtime in the yard is over, all the children are putting away their playthings and returning to their classroom. However, instead of cleaning up, only Hiro-chan is continuing to play in the sandbox in the yard.

Singing Time
This is the story of Mi-chan. The teacher is playing the piano, and all the children are singing a song in their classroom. However, instead of singing, only Mi-chan is running around the room the entire time.

End-of-day Meeting
This is the story of Icchan. Before going home, all the children are listening quietly to their teacher in their classroom. However, instead of listening to the teacher, only Icchan keeps talking to a friend beside Icchan about a favorite TV show.
Appendix 2. Example of Illustration of the Task

Illustration of the Story “School Lunch” (female version)

Note. Copyright of the illustration: Eri Sasayama

Supplemental Illustration for Q2 (Emotional Response)

Note. Illustrations for the happy, sad, and angry facial expressions were created based on Watanabe et al. (2019). An illustration of the neutral facial expression was created by Mizokawa (2011).

Supplemental Illustration for Q3 (Interaction Judgment)