ASIA-PACIFIC JOURNAL OF RESEARCH
IN EARLY CHILDHOOD EDUCATION
Vol.6, No.1, January 2012, pp.141-159

ISSN 1976-1961

The Distribution of Clean-Up Jobs in Japanese Kindergarten Classrooms: An Exploratory Study of Young Children's Views on Sharing Work Responsibilities

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Abstract

Although children's reasoning about the allocation of rewards has been studied extensively, little research has questioned how children address the distribution of work responsibilities. The present study interviewed 5-year-olds in a kindergarten ("Yochien") in Japan, showing a series of pictures illustrating free-play time and clean-up time, and asked how they thought the clean-up jobs in the classrooms should be distributed. The results confirmed previous studies that children's distribution of tasks were strongly guided by the player's responsibility norm, that is, the task of cleaning up after play time should be done by the person who used the play materials. However, some kindergarteners consider classroom clean-up should be shared among class members and that it is not the sole responsibility of the player. Various rationales for sharing the clean-up work such as saving time/labor, being more enjoyable and being helpful were given. The results also revealed that at least some kindergarteners varied the amount of work loads distributed according to the situational factors (needs, benefits of playing) but that age difference was not a factor affecting their distributions. Implications for future studies are discussed.

Keywords : distribution, clean-up, responsibility, kindergarten

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How children distribute resources and how they view fair ways of allocating them has been studied extensively. Much research has focused on children's reasoning about the allocation of rewards (e.g., Damon, 1977; Enright, Franklin, & Manheim, 1980; Hook & Cook, 1979; Keil & McClintock, 1983; Watanabe, 1990). In those studies, researchers have found that there is a developmental trend in children's allocation behaviors. The ways in which children around 4 or 5 years of age share "rewards" seem to be strongly influenced by their own interests or by aspects such as the age and heights, and thereby they appear to allocate more rewards to themselves or to the oldest child in the group. Among children at about age 5 and 6, equal distribution is strongly endorsed. Children older than 8 years old begin to show understanding of equity distribution; that is, reward distribution is weighted differently according to how much contribution the recipients have made. Moreover, older children also show preferences for need-based distributions where rewards are allocated according to personal needs of the recipients.

These studies, however, were based on the equity theory of Adams (1965) and concerned with specific situations where the resources to be divided are given as rewards for labor. That is, the researchers were examining the children's developing abilities to allocate rewards in proportion to how much work the recipient has contributed. In contrast, other studies have investigated children's reasoning about the distribution of resources other than reward-for-work such as the amount of learning at school (Thorkildsen, 1989) and voting rights and charity (Sigelman & Waitzman, 1991). The results of these studies suggested that children's reasoning about the distribution of resources should not be understood only in terms of the developmental trend from selfish allocation to equal distribution and eventually to make equity or need-based distributions. Sigelman and Waitzman (1991), for example, argued that the children's development might be seen as becoming more able to choose and apply one of the distributive justice principles that is most appropriate to given situations.

While the resources to be distributed in most of the previous studies were those which were favorable to children, that is, something that children are likely to want to gain, the present study examines how children distribute something which may be considered a "burden" such as work. The issue of fair distribution of burden has been studied broadly in various areas such as division of household labor between spouses (e.g., Blair & Johnson, 1992; Fuwa & Cohen, 2007) and sharing the cost of controlling the emission of greenhouse gases among

countries (e.g., Ringius, Torvanger, & Underdal, 2002). Although this aspect of distributive justice certainly concerns children's lives as well, little research has addressed the children's views of fair distribution of work.

A few studies have examined children's reasoning about dividing household chores among siblings. For example, in a study by Thomson (2007), children at ages 8, 11 and 14 were read stories representing three principles of distributive justice (equity, equality and need) and were asked to judge how fair the division of house chores was. The equality stories depicted children in the family with equal chore responsibility, whereas in the equity stories two of the four siblings get a reduction in chores because they "contribute" by earning their own money working outside of the home. The need-based stories showed that two of the four children in the family "need" a reduction in chores because of personal obligations at school.

The results showed that the majority of children strongly endorsed the equality distribution principle regardless of age. Although previous studies on distribution of rewards showed that the need-based principle was endorsed more by 8-year-olds and older children (e.g., Damon, 1975), the third and tenth graders in Thomson's study did not differ in their endorsement of the norm. Moreover, the sixth graders were least likely to believe the need-based division of chores was fair, saying that the sibling's need to stay at school could not be an excuse for reducing their duties at home.

Other studies have examined children's fairness judgments based on other type of justice principle regarding attribution of responsibility; that is, the person who created the need for work should be responsible for "cleaning up after yourself." A study by Shure (1968) found that children as young as 4 believed it was fair for the person who played with the toys to do the clean-up afterwards. Warton and Goodnow (1991) asked children at ages 8, 11 and 14 to judge if the distribution of tasks in the following vignettes were "fair":

1) only one child played while the second child who did not play was asked to do the clean-up, and

2) both children played the game but because one child went off to a friend's place the other child was obliged to do the clean-up alone.

The results showed more than 90 percent of all participants judged the first distribution scenario as "unfair." For the second distribution, a large majority of third and sixth graders judged it "unfair" by explaining that "they had both played." Only some of the oldest

participants at age 14 thought it would not be unfair for one player to do the whole clean-up because the unequal work distribution would eventually balance out in the long run. These results indicate that most of the children believe the clean-up responsibility should be allocated strictly to the players and not to the non-players, and that those who played cannot evade the responsibility of clean-up even when they have left the scene.

The present study examines how young children distribute the responsibilities of clean-up work in their classrooms. Clean-up time in early childhood classrooms is of our particular interest because young children are likely to face the issue of fair distributions of work responsibilities during clean-up time (DeVries & Zan, 1994). In many early childhood classrooms, children are expected to stop their play when clean-up time is announced and put away the toys they used during play time. By doing clean-up everyday, young children are expected to learn to take responsibility of cleaning up after themselves (i.e., clean up the mess they made). In many classrooms, however, children are also encouraged to help each other to clean the entire room and are thus expected to tidy up materials even when they did not use them. By establishing such expectations, the teacher tries to promote feelings of shared responsibility in the children for taking care of their classroom (e.g., DeVries & Zan, 1994). Young children are therefore instructed to clean up after themselves while also being encouraged to share the work whether or not they used specific materials. Since some children in early childhood classrooms often try to avoid doing the clean-up (e.g., Corsaro, 2003), conflicts regarding who should do the task are likely to occur. Yet no study to our knowledge has investigated how young children distribute the work responsibilities amongst classmates.

The present study, therefore, is the first attempt to explore how young children distribute the clean-up work in their classrooms. The first purpose was to examine the views of young children in early childhood classrooms, asking if the responsibility for clean-up work was the player's own ("player's responsibility") or if it was a shared responsibility in which all classmates should take part. We also asked what rationales they used when distributing the clean-up jobs. Examining the ways in which young children distribute the clean-up jobs will shed light on the children's developing sense of fairness in sharing the work responsibilities. In addition, we were also interested in examining the situational influences on young children's decisions because previous studies on reward distribution have shown that

kindergarteners are often insensitive to the contextual factors such as differences in contributions and needs, tending to make reward distributions based on their self-interest or irrelevant characteristics such as age. Therefore, the second purpose of the present study was to examine whether young children's decisions on the work distributions varied according to contextual factors.

In Japanese kindergartens, in particular, clean-up is considered an educational activity in which children are expected to learn to cooperate as well as to take care of themselves (Minowa et al., 2009; Nakatsubo et al., 2009). Thus, children's conflicts regarding the attribution of responsibilities are often observed (Matsuda, 2006). Furthermore, as a number of studies have reported, Japanese teachers manage classrooms by delegating authority to children and involving them in discussing their own problems (e.g., Kotloff, 1993; Lewis, 1995). We therefore expected young children in Japanese early childhood classrooms to discuss and make their own judgments when problems related to clean-up occurred.

Method

Participants

Participants were 34 children from 5-year-old classrooms (12 boys, 22 girls, M = 73.9 months, age range: 68-79 months) in a public full-time kindergarten ("Yochien") in a major city in western Japan. As this kindergarten offers two years of education and most of the participants were in their second year, they had experienced approximately one and a half years of life in the kindergarten, including clean-up time. Furthermore, because a school year starts in April in Japan and this research was conducted in November, the participants had spent about six months in the same classroom with the same class mates. All participants were Japanese and from middle-class families. Two other children were also interviewed but excluded from the analysis because they were unable or unwilling to respond to the questions and withdrew from the task.

Materials

Participants were shown a series of pictures illustrating free-play time and clean-up time in a kindergarten classroom where two children were involved. The pictures were presented to the participants under one of the following two settings: (1) In a self-involvement (SI) setting, one of the children in the picture was identified as the participant him/herself and the other child as his/her playmate, and (2) in a non self-involvement (NSI) setting, two anonymous children were involved in the scene. These SI and NSI settings were included to see whether the participants' distributions were influenced by their self-interest, which was shown to be a characteristic of young children in the previous studies on distribution of rewards (e.g., Damon, 1977).

Table 1. *Descriptions of Each Situation*

	Self-Involvement(SI) Setting Situation	**Toy used**		**At Clean-up time**
		Self	**Playmate**	
1	2 played/ 2 present	Yes	Yes	Both are present
2	2 played/ 1 present	Yes	Yes	Playmate is not present
3a	1 played(playmate)/ 2 present	No	Yes	Both are present
3b	1 played(self)/ 2 present	Yes	No	Both are present
4	2 played/ need	Yes	Yes	Self is sick
5	2 played/ benefit	Yes/less	Yes/more	Both are present

	Non Self-Involvement(NSI) Setting Situation	**Toy used**		**At Clean-up time**
		A	**B**	
1	2 played/ 2 present	Yes	Yes	Both are present
2	2 played/ 1 present	Yes	Yes	B is not present
3	1 played(playmate)/ 2 present	No	Yes	Both are present
4	2 played/ need	Yes	Yes	A is sick
5	2 played/ benefit	Yes/less	Yes/more	Both are present
6	2 played/ age	Yes	Yes	Both are present

All the characters in the pictures were drawn androgynously and in colors that were not associated with any specific person.

Each participant was interviewed and questioned on the six different situations that young children are likely to experience in their classrooms (see Table 1 for the descriptions of each situation). The vignettes used in the interviews were similar to previous studies (Shure, 1968; Warton & Goodnow, 1991), involving two children at clean-up time after play in their classroom. However, unlike the previous studies, which presented a particular way of distribution for each situation and asked the children to judge fairness, the participants in this study were asked to choose one of three possible ways of distributing tasks for each situation.

Situations 1, 2 and 3: The player's sole responsibility or a shared responsibility with friends.

In situation 1 and 2, two children played together with the toys (blocks) during free-play time. In situation 1 both children were present at the clean-up time, whereas in situation 2 one child had left the scene when the clean-up time began. In situation 3, only one child played with the toys, but the child who played and the other child who did not play were present at the scene of clean-up time.

Situations 4, 5 and 6: Equal distributions or distributions according to contextual factors (needs, benefits, or age differences).

In situations 4 and 5, two children played with the toys together during free-play time but contextual factors in each situation varied. In situation 4 (needs), one child became ill (stomach ache) at the time of clean-up. In situation 5 (benefits of playing), one child used more toys than the other. In situation 6 (age differences), one child was older than the other.

Procedure

All participants were interviewed individually in a quiet room in the kindergarten. Considering the length of interview time they were presented with only one of the two settings, SI or NSI.

The interviewer showed the pictures to each participant, one situation at a time and explained the situation. All situations were presented in a random order. To present each

situation as being independent from the others, the interviewer used different color labeling as names for all the characters except for the participant's own name. As shown in Table 1, participants in SI setting were presented with situation 3a (the one who played was the playmate) and situation 3b (the one who played was themselves) while there was only a situation 3 in NSI setting. Situation 6 was presented only to NSI children.

Participants were then asked the following questions (referring to the pictures of clean-up time):

"When it's time to clean up, what should you (A) and your playmate (B) do?

Should your playmate (B) clean up the toys alone?

Should you (A) and your playmate (B) clean up the toys together?

Or should you (A) clean up the toys alone?"

When participants selected one of these three options, the interviewer asked them to explain the reason for their choice and probed for further clarifications when necessary.

The researchers conducted the interviews with the consent of the school administrator and the classroom teachers and ensured the safety of the children. The interviewer had built rapport with children by playing with them for 8 weeks prior to the research. During free play time, the interviewer invited one child at a time to have a conversation in another room and

made sure that the children could withdraw anytime during the interview. For 12 weeks after the interview, the researcher went back to the kindergarten and made sure that no problem had occurred.

All interviews were audio-taped and transcribed verbatim. Because interviews were conducted in Japanese, the transcripts were translated in English afterward. It should be noted that although there are always some difficulties in translating children's utterances, the authors placed an emphasis on the importance of conveying the meaning. For example, when one of the participants' responses was translated, "It would be much laborious to do by oneself," the authors discussed and decided to use the word "laborious," which young children almost never use, but did so for the purpose of conveying the meaning.

Analyses of the Rationales for Distribution

The participants' explanations for their distribution choices in situation 1 to 3 were coded into nine categories: (a) player's responsibility, (b) time/labor saving, (c) feelings, (d)

conventions, (e) helpfulness, (f) relationships, (g) authority, (h) fairness; and (i) no explanation. First, the authors inductively generated a number of categories by reading the transcripts several times. Then, the coding categories were eliminated or combined so that they were exhaustive and mutually exclusive (Merriam, 1998). Table 2 shows all the categories along with typical answers. Then, the two authors independently coded all transcripts. The inter-coder reliabilities were .83-.94. All disagreements were resolved by discussion.

Table 2. *Categories for Rationales and Examples of Responses*

Categories for Rationales	**Examples of Responses**
Player's Responsibility	Because he played with the blocks./One who made mess should clean up.
Time/Labor Saving	It's much quicker when two people do it./It would be much laborious to do by oneself.
Feelings	It is more fun to do clean-up with other person./One would feel lonely to do clean-up by oneself.
Conventions	We always do clean-up with other person./I have done clean-up even when I didn't use the toys.
Helpfulness	I want to help.
Relationships	There would be a fight if people don't do clean-up.
Authority	We would be reprimanded by the teacher./Mother said one should clean-up.
Fairness	It's bad if one person cleans up and the other doesn't./It is wrong for only one person to clean up because the other person would be unoccupied.
No Explanation	I don't know./ (unidentifiable responses)

Results

Distribution of Work

Because two participants were excluded from the analysis, 16 responses for the self-involvement (SI) setting and 18 for the non self-involvement (NSI) setting were analyzed.

Table 3 shows the number of participants' responses in each situation.

In situation 1 (where both children used the toys and were present at clean-up time), all participants in SI and NSI settings answered "Both children should clean up."

In situation 2 (where both children played but only one was present at clean-up time) all participants (except one) in SI and NSI settings answered "Both should clean-up".

In situation 3 (where only one child played with the toys yet both were present at clean-up) 72.2% in NSI setting thought "the clean-up should be done by one child alone." In SI setting, 68.8% also answered that one child (i.e., self) who used the toy should do the clean-up alone even when the other person who did not use the toy was present (situation 3b). However, in the SI setting, when the toy user was the playmate and not the self (situation 3a), half of the participants answered they would share the clean-up job with the playmates.

Table 3. *Number of Responses (and percentage) in Each Situation*

		Self-Involvement(SI) n=16(%)		**Non self-Involvement(NSI) n=18(%)**	
		Who should do the clean-up			
	Situation	**Both Children**	**Self/playmate Alone**	**Both Children**	**One Child Alone**
1	2 played/ 2 present	16(100.0)	0(0.0)	18(100.0)	0(0.0)
2	2 played/ 1 present	15(93.8)	1(6.3)	17(94.4)	1(5.6)
3a	1 played(playmate)/ 2 present	8(50.0)	8(50.0)	5(27.8)	13(72.2)
3b	1 played(self)/ 2 present	5(31.3)	11(68.8)	-	-
4	2 played/ need	15(93.8)	1(6.3)	16(88.9)	2(11.1)
5	2 played/ benefit	15(93.8)	1(6.3)	16(88.9)	2(11.1)
6	2 played/ age	-	-	17(94.4)	1(5.6)

The response patterns of the participants across six situations in SI setting were analyzed and four types of choice patterns were found: (a) responsibility rule type (distribute the clean-up according to player's responsibility rule in every situation), (b) helping type (offer to help even when he/she did not play and do not expect the other's help when he/she played alone), (c) selfish type (do not offer to help when the other played alone but expect the other's

help when he/she played alone), and (d) collaboration rule type (share the clean-up in every situation). The number of the participants for each type was (a) 6, (b) 5, (c) 2 and (d) 3.

Rationales for* D*istribution

Table 4 shows the rationales given by the participants in situations 1, 2 and 3. All participants answered "Both should clean up" in situation 1 where two children played and both were present at the clean-up time. 41.7% of their rationales were based on the player's responsibility norm, that is, one is responsible for cleaning up the toys he/she used. However, some participants also thought the clean-up jobs should be divided among the players not because they used the toys but because it was either time/labor saving (25.0%), or more enjoyable to do it together (16.7%).

Table 4. *Number of Responses(and percentage) for Each Rationale in Situation 1-3*

	Who should do the clean-up					
	Situation 1		**Situation 2**		**Situation 3**	
Categories for Rationales	**Both Children**	**One Child**	**Both Children**	**One Child**	**Both Children**	**One Child**
Player's Responsibility	15(41.7)	-	14(42.4)	0(0.0)	0(0.0)	30(93.8)
Time/Labor Saving	9(25.0)	-	4(12.1)	0(0.0)	5(27.8)	0(0.0)
Feelings	6(16.7)	-	4(12.1)	0(0.0)	2(11.1)	0(0.0)
Conventions	2(5.6)	-	1(3.0)	1(50.0)	1(5.6)	0(0.0)
Helpfulness	0(0.0)	-	0(0.0)	0(0.0)	7(38.9)	0(0.0)
Relationships	0(0.0)	-	1(3.0)	0(0.0)	0(0.0)	0(0.0)
Authority	1(2.8)	-	1(3.0)	0(0.0)	0(0.0)	1(3.1)
Fairness	1(2.8)	-	1(3.0)	0(0.0)	1(5.6)	0(0.0)
No Explanation	2.(5.6)	-	6(18.2)	1(50.0)	2(11.1)	1(3.1)
Total Number of Responses	36(100.0)	-	32(100.0)	2(100.0)	18(100.0)	32(100.0)

Note: All responses in Situation 1 were counted when a participant gave more than two rationales.

In situation 2 where two children played but one child had left the scene, 42.4% of the participants who answered "Both should clean up" thought the person who had left should come back and pursue the responsibility of clean up as long as they had used the toys (see Table 4). A few participants also gave the rationales of "time/labor saving" and "feelings".

As we have seen, more participants thought that one child should do the job alone in situation 3 where only one child played but both were present at clean-up time. The results reveal, as shown in Table 4, that over 90% of "one child" responses were guided by the player's responsibility norm. The participants who answered the clean-up job should be shared even when one child did not play, thought that doing the job together was helpful to others (38.9%) or saving on time/labor (27.8%). Only one participant in each situation based the decision on the fairness of sharing the responsibility for clean-up among classmates.

Weighted Sharing of Work

As shown in Table 5, all but one or two participants answered that the clean-up should be

Table 5. *Number of Responses and Weighted in Each Situation*

		Self-Involvement(SI) n=16		**Non self-Involvement(NSI) n=18**	
		Who should do the clean-up			
	Situation	**Both Children (Weighed sharing)**	**Self/playmate Alone**	**Both Children (Weighed sharing)**	**One Child Alone**
1	2 played/ 2 present	16(0)	0	18(0)	0
2	2 played/ 1 present	15(0)	1	17(1)	1
3a	1 played(playmate)/ 2 present	8(1)	8	5(1)	13
3b	1 played(self)/ 2 present	5(0)	11	-	-
4	2 played/ need	15(3)	1	16(5)	2
5	2 played/ benefit	15(6)	1	16(8)	2
6	2 played/ age	-	-	17(1)	1

Note: The numbers in parenthesis indicate "weighted sharing" responeses.

done by both children in situations 4, 5 and 6. The participants decided that the work should be shared regardless of the differences in needs, benefit of playing or the ages of the players. However, some of those participants spontaneously varied the amount of work load to be distributed to each character. For example, in situation 4, one participant responded "B can do a lot of work and A can help a little because she has a stomach ache." In situation 5, another child responded "Both children should clean up, but B should do more work." We recorded such cases as "weighted sharing" and the number of the responses in each situation is shown in the parenthesis in Table 5.

Whereas the participants rarely gave "weighted sharing" responses in other situations, 8 out of 31 responses in situation 4 and 14 out of 31 responses in situation 5 were weighted. Moreover, in situation 6 where the age difference between two characters was prominent, only one out of 17 responses was weighted.

Discussion

The results confirmed the previous studies (Shure, 1968; Warton & Goodnow, 1991) that the children's distributions were strongly guided by the player's responsibility norm, that is, the clean-up jobs should be done by the person who used the play materials. The endorsement of the norm was strong even in situations where the player was not present or sick at the time of clean-up. However, unlike previous studies on household chores which found that older children believed the clean-up responsibility should be given strictly to the player and that it was unfair even to ask the non-player to help, about 30% to 50% of the kindergarteners in this study distributed the clean-up job between the player and the non-player who happened to be present at the time of clean-up. These results suggest that some kindergarteners consider classroom clean-up should be shared among class members and that it is not the sole responsibility of the player.

The difference between the results may be due to the fact that household chores include different tasks, such as sweeping the floor, washing dishes and taking out trash bags, that vary in the time required to complete them (Thomson, 2007) and in one's preference for certain jobs (Warton & Goodnow, 1991). In addition, household chores are often assigned to

particular family members by parents (Goodnow & Burns, 1985). Clean-up time in early childhood classrooms, in contrast, is scheduled as one of classroom routines in which teachers and children simultaneously engage in tidying up their classrooms before proceeding to the next scheduled activity. While household chores are left to individual members to pursue the responsibility, children in the classrooms may be more apt to collaborate to get the jobs done during the time available.

It is, therefore, possible to interpret that children collaborate because they consider the finishing of the clean-up job as a condition of starting the next activity. The other interpretation would be that the cultural context might influence the children's inclinations for sharing the clean-up work because previous studies have found that young children begin to show sharing behaviors earlier in some cultures than in others (e.g., Rao & Stewart, 1999; Stewart & McBride-Chang, 2000). Because our study comprised of only Japanese kindergarteners, the possible influence of cultural differences must be examined in future studies. However, this study also raised a question that is related to the argument concerning individualism versus collectivism, whether they are to be explained by culture (Markus & Kitayama, 1991) or to be explained by situation (Oyserman, Coon, & Kemmelmeier, 2002). In further studies, we need to carefully examine the extent to which young children's distribution of clean-up jobs are affected by the cultural or/and situational differences.

The analyses of the rationales showed that the kindergarteners were distributing jobs to both players using not only the player's responsibility norm but also for other reasons such as doing the job together would be enjoyable or that it would save time and labor. When they decided that the non-player should also do the clean-up, they did so because they thought doing the job together would be helpful to others as well as time or labor saving. These results suggest that kindergarteners in the classrooms are inclined to collaborate in the clean-up mostly for practical and prosocial reasons. Besides getting the job done, children's sharing the work with others may be explained by the development of prosocial behavior, namely offering to help (Grusec, Goodnow, & Cohen, 1996). However, it is noteworthy that, although there were only a few, 5-year-olds in this study raised the issue of fairness, saying "It's bad if one person cleans up and the other doesn't," which suggests that the sharing of work between two persons is viewed as reciprocal.

With the exception of a few studies (Anderson & Butzin, 1978; Huntsman, 1984; Nelson &

Dweck, 1977), previous studies on reward allocation have repeatedly shown the kindergarteners' insensitivity to the contextual factors. However, the results of this study reveal that at least some kindergarteners based their distribution of tasks on both need and equity, suggesting that the 5-year-olds felt the necessity to vary the amount of work loads according to the situational factors. With regard to age differences, previous studies on reward allocation showed young children's tendency to distribute more to older children (Enright, Enright, & Lapsley, 1981; McGillicuddy-DeLisi & Watkins, 1994). In this study, however, the participants' decisions were not affected by the age difference of the characters. It is possible that all children in the kindergarten are considered equally responsible for doing the clean-up jobs regardless of their age.

With regard to self-interest, young children's tendency to allocate more resources to themselves at age of 3 and 4 has been consistently found in previous studies, and children become less self-centered and sharing behaviors increase over the preschool years (e.g., Fehr, Bernhard, & Rockenbach, 2008; Hook & Cook, 1979; Rochat et al., 2009). If children show their self-centered tendencies in distributing clean-up work, we could expect them to evade distributing the work to themselves. In the present study, we did find children who expect other's help but do not offer their help (selfish type). However, we also found kindergarteners who offer to help others while expecting no help in return (helping type). Because this study only included 5-year-olds, further studies are needed to examine the developmental aspects of young children's work distributions which should be assessed by their chronological age and/or developmental measures. In Japanese kindergartens, for example, children engage in the clean-up from the age of 3. We need more studies investigating how children's views on sharing the work change during preschool years.

As discussed above, this exploratory study has many limitations and is especially lacking in developmental aspects and cultural/situational backgrounds. Because this study describes data arising from a small number of participants, it is not possible to generalize the results and further inferential statistical studies with larger samples are needed. Moreover, because previous studies on clean-up time in Japanese preschools found variations among kindergartens in the educational aims and how to carry out the clean-up with children (Minowa et al., 2009; Sunagami, Akita, Masuda, Minowa, & Yasumi, 2009), future studies are necessary to examine to what extent the differences in teaching practices influence the

children's views on distributing the clean-up work.

Despite the limitations, this study has also revealed the complexity of clean-up study. One of the kindergarteners in this study who claimed "one should do the clean-up job alone" explained that the playmate did not have to do the clean-up, but could go to the lunch room and save seats for both of them. It is possible that the kindergartener viewed doing the clean-up work as a trade-off for other work relating to activities in which he and his classmate will jointly engage. This response evoked the necessity to consider whether the manner in which children distribute clean-up work would be influenced by the conditions that are expected to occur subsequent to the clean-up. A study by Thompson, Barresi, and Moore (1997) found that children at age 4 and 5, but not younger children, could take the future situation (such as a greater gain of rewards) into account and decide the current distribution of rewards accordingly. However, no previous study has examined whether children's distribution patterns are affected by their desire to collaborate in future activities. Further research should be designed to examine the differences in work distributions between a situation where a mutual relationship is retained by engaging in co-operational activities and another situation where the relationship will no longer continue. Such a study will shed new light on the development of young children's reciprocal reasoning involved in sharing of the work responsibilities.

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