Empathy and group processes in Japanese preschool children: The odd one out among friends receives less empathic concern than out-groups

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ABSTRACT

Research on empathy in intergroup contexts among children in collectivistic cultures is limited. To address this gap, this study examined empathic responding in two group contexts (intergroup and intragroup) among Japanese children by taking into account the collectivistic cultural context. Children aged 4 to 6 years participated in an experimental session (N = 50, M_{age} = 65.11 months). They listened to two versions of narratives about children of their age who were saddened because of a nasty wind that had blown their sand mountains away. The group membership and in-group status of the characters were manipulated. In the task, children rated the extent to which the characters were feeling sadness (affective perspective taking) and indicated the number of stars (empathic concern) for the characters. Age-related differences were found, with older children showing more affective perspective taking than younger children. Children of all age groups tended to express less empathic concern for the odd one out among friends (a loner in the group) than for the majority. Findings suggest that empathic responding is in part shaped by socialization, and cultural variations in empathy may emerge early in life.

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Introduction

Early childhood is full of important milestones for the development of empathy (Hoffman, 1987; Ungerer et al., 1990; Uzefovsky & Knafo-Noam, 2017). From infancy to toddlerhood, children develop differentiation between the self and others, and they come to understand that what other people are feeling can be different from their own feelings and begin looking for emotional cues to understand what is going on in a given situation (Geangu, Benga, Stahl, & Striano, 2011). As a milestone in the development of empathy, the self–other distinction facilitates the understanding of others' emotions and mental states and is related to empathizing with others (Decety & Jackson, 2004; Rieffe, Ketelaar, & Wiefferink, 2010).

For the next milestone, young children acquire a variety of empathic abilities, including affective perspective taking, which involves inferring how others are feeling in a certain situation and imagining oneself in another's position (Eisenberg, Shea, Carlo, & Knight, 1991; Harris, Johnson, Hutton, Andrews, & Cooke, 1989; Knafo, Steinberg, & Goldner, 2011; Pons, Harris, & de Rosnay, 2004). With the perspective-taking ability to infer the emotional state of others, spontaneous empathic responding becomes distinct and goal oriented (Denham, McKinley, Couchoud, & Holt, 1990). When another person displays distress, the child tries to make the person feel better (Strayer & Roberts, 2004; Wellman, Cross, & Watson, 2001). Even children as young as 18 months show concern for another person who is harmed emotionally even when no emotional cue is present (Vaish, Carpenter, & Tomasello, 2009). To sum up, empathy develops rapidly during early childhood, and young children are capable of accurately inferring others' feelings and providing help.

Empathy and the identity of the recipient

Studies have documented that infants and preschool children already show intergroup biases where they show more favorable attitudes toward members of their social groups than toward out-group members (Baron & Banaji, 2006; Dunham, Baron, & Carey, 2011; Guerin, 1999; Hailey & Olson, 2013; Hamlin, Mahajan, Liberman, & Wynn, 2013; McLoughlin & Over, 2017; Nesdale, Durkin, Maass, & Griffiths, 2005; Over, Eggleston, Bell, & Dunham, 2018; Yu, Zhu, & Leslie, 2016). Older children (5–6 years) treat in-group members and out-group members differently compared with younger children (3–4 years), who show lower in-group favoritism (Yu et al., 2016). Moreover, older children attribute more uniquely human qualities to members of their own group than to those of another group (McLoughlin & Over, 2017).

Whereas empathy has been proposed as a primary motivation for prosocial behavior (Batson et al., 1991; Eisenberg, Eggum, & Di Giunta, 2010), more recent studies have captured the comprehensive picture of empathy. Empathy works specifically for helping close others, whereas others who belong to a different social category receive lesser or no empathic concern (Bloom, 2016; Chiao & Mathur, 2010; Cikara, Botvinick, & Fiske, 2011; Hoffman, 2000; Oceja, 2008) even in a minimal group situation where the group assignment is arbitrary (Montalan, Lelard, Godefroy, & Mouras, 2012). Empathy exaggerates a need of a particular individual while the others in the same condition become less noticeable, causing a biased decision in resource allocation (Bloom, 2016; Oceja, 2008). Moreover, the tendency to empathize more with familiar others is present early in life. Children as young as 2 years show more empathy for a familiar person (e.g., their mother) than for a stranger (e.g., an unfamiliar adult) (Young, Fox, & Zahn-Waxler, 1999). Young children are more prosocial to their friends than to nonfriends and strangers if the cost to self is high (Moore, 2009).

Why is it difficult to feel empathy for out-group members? Empathy has evolved to ensure a parent–child relationship and group cohesiveness and is sensitive to contextual cues such as the identity of a recipient in a helping situation (Decety & Cowell, 2014). In the intergroup context, empathy works under specific and often limited conditions such as individuating the out-group member, learning about the biased nature of empathy, and expending extra efforts to understand the out-group member (Schumann, Zaki, & Dweck, 2014; Sheng & Han, 2012). Ultimately, empathy may backfire in the intergroup context as it feeds prejudice, at the same time, activating the individual's group identity (Cikara et al., 2011; Dovidio et al., 2010; Vorauer & Sasaki, 2009). To sum up, empathy may be reserved for

forming and maintaining good relationships with friends and family. In the intergroup context, empathy may promote bonding between in-group members while fueling animosity toward out-group members.

So far, empathy has been reviewed from an intergroup perspective under the assumption that one's group identity is the core of social life (Tajfel & Turner, 1979). However, in cultures where the value of intragroup cooperation outweighs intergroup competition, empathy may be differentially influenced by social contexts. In the next section, we start with a review of the developmental model of empathy and introduce the East Asian model of group dynamics to explain how culture-specific motives and goals in social behaviors may influence empathic responding.

Culture, development of empathic abilities, and group dynamics

Culture and empathy development

The dominant theories of empathy development assume universality, and cross-cultural findings have shown that at least some aspects of empathy are culturally uniform. With an emphasis on cognitive empathy, Piaget (1932) suggested that young children are primarily egocentric, and it is not before they master logical thinking that they understand the perspective of others. The underlying assumption is that empathic abilities develop along with general cognitive development through peer interactions that involve sharing and role taking. Young children may spontaneously try to help another but fail to be efficient without understanding the other's goal and intention (Chandler & Greenspan, 1972; Rheingold, 1982).

More recently, Hoffman (1987) proposed four developmental stages of empathy that gained cross-cultural support. Young children can recognize other people's feelings and may respond to their distress by emotional contagion, which may be an inchoate form of empathic concern (Borke, 1973; Zahn-Waxler & Radke-Yarrow, 1990). In later stages, empathic concern emerges as young children differentiate themselves from others and acquire perspective-taking and emotional regulation skills (Eisenberg, 2000; Knafo, Zahn-Waxler, Van Hulle, Robinson, & Rhee, 2008; Rieffe et al., 2010; Takamatsu, Tsou, Kusumi, & Rieffe, 2021). Moreover, across cultures, secure attachment, parental empathy, and family environment foster the development of empathy and prosocial motivation (Mikulincer, Shaver, Gillath, & Nitzberg, 2005; Trommsdorff, 2008).

However, culture may shape empathic responding (Atkins, Uskul, & Cooper, 2016; Cassels, Chan, Chung, & Birch, 2010; Chopik, O'Brien, & Konrath, 2017). Notably, cross-cultural studies on theory of mind have shown that culture influences the task performance and developmental trajectory of the ability to understand others' mental states (Hughes et al., 2014; Moriguchi, Okumura, Kanakogi, & Itakura, 2010; Naito & Koyama, 2006). Japanese children passed the false belief task later than Western children (Hughes et al., 2014), whereas they were good at picking up contextual cues to infer implicit meanings in a given social context (Naito & Koyama, 2006). East Asians perceive themselves as embedded in a given context (Nisbett, 2007) and pay attention to the surroundings (e.g., who is there) to infer the focal character's emotion (Masuda et al., 2008). For this reason, children in high-context collectivistic cultures may tend to look for contextual cues to understand a social situation rather than trying to understand the target individual's mental states.

Culture and group dynamics

Culture-specific motivations and behaviors arise because people employ an interpersonal strategy that best helps them to navigate social life smoothly in the cultural context (Yamagishi, Hashimoto, & Schug, 2008). Yuki and colleagues (Brewer & Yuki, 2007; Yuki, 2003) have proposed an East Asian model of group dynamics to explain why assumptions underlying the social identity theory, such as intergroup competition (Tajfel & Turner, 1979), do not fit well in East Asian societies. In the East Asian model of group dynamics, where the individual member is interconnected closely with other in-group members, the interpersonal strategy is geared to relational harmony, and people care about maintaining cooperative relations within a group more than differentiating us (in-group) and them (out-group) (Brewer & Yuki, 2007; Hashimoto & Yamagishi, 2016; Markus & Kitayama, 1991). People are motivated to avoid causing relational discord and tend to use preventive strategies such as not questioning

or disagreeing with what the majority in the group agrees on (Hashimoto & Yamagishi, 2016; Honda et al., 2017).

Japanese children are exposed to the cultural value that equates relational harmony with group conformity in schools and at home (Imada, 2012; Kobayashi, 2001; Trommsdorf, 1985). With one exception (Killen, Crystal, & Watanabe, 2002), studies on school children and adolescents have found that a nonconformist peer is the odd one out among friends (Fukushima, Sharp, & Kobayashi, 2009; Honda et al., 2017; Mino, 2006; Takemura & Takagi, 1988). Japanese children may ostracize a peer who deviates from the group norm about conformity (Mino, 2006). Middle school children who have been bullied tend to make different behavioral choices than their peers when they are asked to go along with their other friends or not (Takemura & Takagi, 1988). Thus, in Japanese social situations, someone who has disturbed relational harmony, such as by opposing what everyone in the group agrees on, pays the price for the deviance.

Because empathy is context dependent, we can expect that empathic responding will vary among cultures that differ in group dynamics. In particular, empathy disfavors others who threaten in-group ties (Cikara et al., 2011). In the Western model of group dynamics, empathic bias against out-group members arises because people have a strong affinity for in-group members. In East Asian contexts, an in-group member who stirs relational harmony would be a threat to in-group ties, whereas out-group members have little or no effects on the perceived threat and harmony within the group (Brewer & Yuki, 2007; Yuki & Takemura, 2013). Given that Japanese collectivism is peer oriented (Dien, 1999), Japanese children would show more empathy for peers who keep harmony than for the odd one out among friends.

The current study

The goal of the current study was to investigate empathic responding in intergroup and intragroup contexts among children in a collectivistic culture. Past studies investigating the relationship between empathy and group membership (e.g., Yu et al., 2016) have shown that older children (5–6 years) tend to treat in-group members with greater empathic concern compared with younger children (3–4 years). Moreover, in the Japanese cultural context, behaviors that do not conform to the majority are judged as socially and morally inappropriate (Honda et al., 2017). Given that children are socialized to adopt cultural values early in life through daily interactions (Azuma, 1994; Hayashi, Karasawa, & Tobin, 2009; Lebra, 1994), the deviant in-group member should receive less empathic concern compared with other in-group members.

Unfortunately, little empirical research has been done on the relationship between culture and empathy in intergroup and intragroup contexts. In this study, we used intergroup and intragroup narratives to examine empathic responding among Japanese preschool children. Based on empirical findings on culture and group dynamics in East Asian cultures as well as the values of relational maintenance in collectivistic cultures, we tested two hypotheses.

H1: In the intergroup narrative, Japanese children will show more empathy for an in-group character than for an out-group character who is described as a competitor.

Past studies have shown that Japanese people show in-group favoritism when the distinction between the groups is meaningful (Sugiura et al., 2015). In other words, they show low in-group favoritism unless they feel threatened by the out-group. Therefore, the minimal group paradigm (creating novel groups by categorizing individuals into groups by minimal criteria) might not be sufficient for Japanese children to experience in-group favoritism. For this reason, we created an intergroup competition to test H1 after assigning children to one of two groups (orange or green). We predicted that Japanese children would show more empathy toward an in-group member than toward an out-group member when there is a competition between the two groups.

H2: In the intragroup narrative, Japanese children will show less empathy for an in-group character who violates a group norm than for other characters.

To test H2, empathic responding in an intragroup narrative was also included in this study. Cultural studies of child development suggest that children are socialized to acquire a repertoire of behaviors consistent with what is desirable in the context (Trommsdorff, 2015). For East Asians including the

Japanese, group behavior is intragroup oriented, and people care more about maintaining relational harmony within a group than about maintaining self-esteem through in-group favoritism (Yuki & Takemura, 2013). Given that Japanese children are socialized to keep harmony with others (Hayashi et al., 2009), we predicted that Japanese children would show lower empathy for an in-group member who violates a group norm than for others who follow the norm (H2).

Based on the finding that, compared with younger children (3–4 years), older children (5–6 years) show more empathy toward in-groups (e.g., Moore, 2009), children aged 4 to 6 years were recruited for this study. For empathy measures, emotional identification, affective perspective taking, and empathic concern were assessed in the two group contexts. Empathy can be either affective or cognitive (Hoffman, 1987). In this study, affective components of empathy (affective perspective taking) were assessed because cognitive measures of empathy during childhood are culture sensitive. In particular, Japanese children tend to perform poorly on a cognitive empathy task that requires verbal free responses (Moriguchi et al., 2010).

Method

Participants

Participants were 50 children aged 4 to 6 years at two kindergartens in the suburbs of Japanese metropolitan cities (20 boys and 30 girls; M_{age} = 65.74 months, SD = 10.10). The children were homogeneous with respect to ethnicity (100% Japanese), and the environment was monocultural. Because the kindergartens were located in the suburbs where the majority of residents are Japanese, the children scarcely had an opportunity to interact with someone with a different cultural background. All the kindergarten teachers and parents were Japanese. The parents gave permission for their children to participate in the study. Using G*Power (power =.80, a medium effect size, and the standard.05 alpha error probability), the initial target sample size was 60, but the data collection was disrupted due to the COVID situation.

Materials and procedure

Children participated individually in a 20-min session in a kindergarten room with chairs and a table. The homeroom teacher took each child to the room. At the beginning, a female experimenter greeted the children and explained that she would be reading a picture book about children belonging to either an orange or green group. Next, using a procedure validated by Dunham et al. (2011), group membership was manipulated. The experimenter asked the children to draw a lot from a box: "Let's see which group you will be in." All the lots were orange, so the children were always placed in the orange group. To increase group identification, the experimenter gave them an orange sticker to wear and said, "See, members of the orange team wear an orange sticker here [pointing at the drawing]." Wearing a group symbol enhances the perceived belonging (Dunham et al., 2011). All the children put the sticker on without any hesitation.

Intergroup and intragroup versions of narratives

The experimenter read two versions of narratives: intragroup and intergroup. The harmful situations were adapted from Mizokawa (2011). The gender of the main characters in the narrative was matched to the children's gender. In the intergroup version, a member of the orange group and a member of the opposing green group competed to make a tall sand mountain in the play yard. At the beginning, they had a quarrel and decided to compete for their groups' right to play in the play yard. The narrative depicted intergroup competition to make the distinction between groups salient (Cikara et al., 2011). Suddenly, an anthropomorphized "nasty wind" came and blew the two sand mountains away.

In the intragroup version, all the characters were members of the orange group. One of the members was depicted as the "odd one out" because this character disagreed with the other group members by saying that he or she wanted to make a rounded sand mountain, not the squared sand

mountain that everyone else wanted to make. The odd one out and three members of the orange group were in the play yard. After the group talk, the odd one out and the other members started to make sand mountains separately, although they were in the same orange group. Again, the same "nasty" wind came and blew the sand mountains away. The order of presenting the narratives was counter-balanced across participants.

Affective perspective taking

On the next page, the two main characters were shown crying. The experimenter said "Look, they are crying" to ensure that the children recognized that the characters felt sad. The experimenter asked the children to indicate how sad each character (the in-group member and the out-group member in the intergroup narrative; the in-group member in the majority and the odd one out in the intragroup narrative) was feeling. Considering that simple rating scales are more easily comprehended by young children (Arsenio & Kramer, 1992), a 2-point scale was used. Children rated the extent to which each character felt sadness using a 2-point rating scale of 1 (*a little bit*) or 2 (*a whole lot*). The internal consistency (Cronbach) was α =.63.

Empathic concern

The experimenter told the children that when people are feeling sad they lose shiny stars in their heart, using a separate paper board depicting two faces: one with a big smile and four shiny yellow stars and the other with tears and no shiny stars: "The more stars you give the boy [girl], the more you can cheer them up." She showed the children a box of yellow star-shaped objects and put 4 stars for each character: "How many stars do you want to give?" (Fig. 1). The number of stars (0–4) given to each character (the in-group member and the out-group member in the intergroup narrative; the in-group member in the majority and the odd one out in the intragroup narrative) was used to measure empathic concern (α =.84). This task was developed based on the previous finding that comforting a crying child predicts empathy in later development (Kato, Onishi, Kanazawa, Hinobayashi, & Minami, 2012). This nonverbal task was included because empathy tasks are susceptible to the effects of culture and linguistics (Kobayashi, Glover, & Temple, 2007). The task was performed after the experimenter made sure that the children understood the procedure well using an illustration.

Fig. 1. Materials used for the empathic concern task: An illustration for explaining the task (top) and star-shaped stickers (bottom).

After the task, the experimenter explained that the characters became happy again because the children gave them shiny stars. Children were told to take off the sticker if they wanted to do so. More than 70% chose to keep the sticker on after the experiment. Some images of the picture book and experimental tools are provided in the online supplementary material. Ethical approval for this study was obtained from the research ethics committee of the author's institution.

Results

Data analysis

A mixed three-way analysis of variance (ANOVA) with age group (4, 5, or 6 years) and gender (girl or boy) as between-participant variables and target (in-group, out-group, group, or odd one out) as a within-participant variable was performed for affective perspective taking and empathic concern. The experiment dataset is available at https://osf.io/jd8g4/?view_only= 64cdb75e37a14b0fa13037cceb3eea69.

Affective perspective taking

The results showed significant main effects of age group, $F(2, 42) = 8.11$, $p = .001$, partial $\eta^2 = .28$, but not of gender, $F(1, 42) = 0.34$, $p = .565$, or target, $F(3, 132) = 0.15$, $p = .933$. A follow-up Bonferroni test showed that the mean ratings of affective perspective taking were significantly different between 4-year-olds and 5-year-olds, $t(42) = 3.06$, $p = .004$, $d = 1.08$, and between 4-year-olds and 6-year-olds, $t(42) = 3.62$, $p = .001$, $d = 1.44$. None of the interaction effects was significant. Fig. 2 presents the results.

Empathic concern

The results showed a significant main effect of target on empathic concern, $F(3, 135) = 5.69$, $p < .001$, partial $\eta^2 = .17$, but not of age group, $F(2, 43) = 1.20$, $p = .311$, or gender, $F(1, 43) = 2.02$, $p = .162$. A follow-up Bonferroni test showed that children expressed more empathic concern to the in-group member in the majority ($M = 3.12$, $SD = 0.97$) than to the odd one out ($M = 2.35$, $SD = 1.25$) in the intra-group narrative. None of the interaction effects was significant. Fig. 3 presents the results.

Overall, these results support H2 but not H1. Japanese children in this study showed reduced empathy for the odd one out, as evidenced by their lower motivation to help the peer feel better.
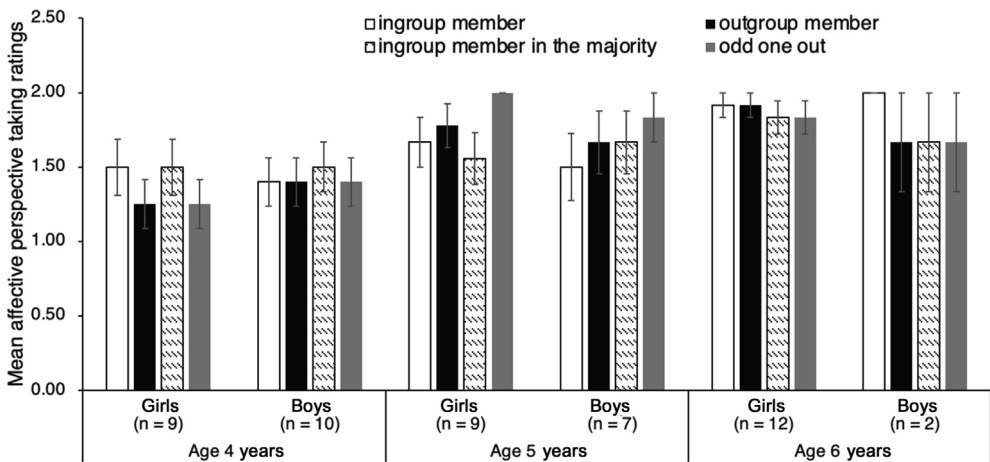

Fig. 2. Mean affective perspective ratings for four targets (in-group member, out-group member, majority, and odd one out) by age category and gender. Error bars represent standard errors.
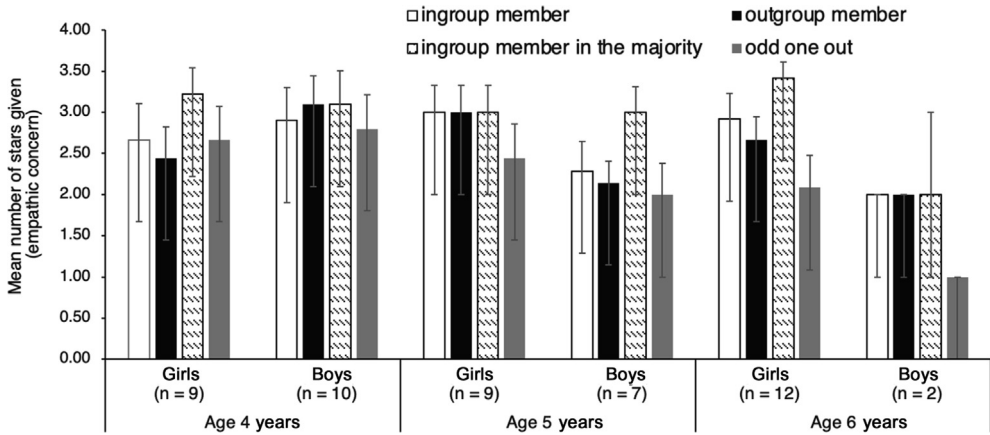
Fig. 3. Mean number of stars given (=empathic concern) to four targets (in-group member, out-group member, majority, and odd one out) by age category and gender. Error bars represent standard errors.

Discussion

The aim of this study was to examine empathy in group contexts by taking into account the partial nature of empathy, culture-specific norms about relational maintenance, and age-related differences in empathic responding. To this purpose, we investigated affective perspective taking and empathic concern in intergroup and intragroup contexts in Japanese preschool children. Past studies have shown that in the intergroup context adults and children show more empathy toward the in-group than toward the out-group (Yu et al., 2016). However, children in collectivistic cultures may be more susceptible to intragroup comparison than to intergroup competition (Yuki & Takemura, 2013). To test this possibility, we investigated empathic responding in intergroup and intragroup narratives. Our hypotheses were formulated based on previous empirical studies on culture and group behavior (Sugiura et al., 2015; Yuki & Takemura, 2013).

There were age-related differences in affective perspective ratings. In this study, older children (5- and 6-years-olds) were more likely than younger children (4-year-olds) to report that the characters were experiencing "a whole lot" (vs. "a little bit") of sadness in the four intergroup and intragroup conditions. This result was consistent with past findings that young children can understand what other people are feeling by looking at the situation from the other person's perspective (Vaish et al., 2009). In addition, affective perspective taking increases rapidly from 3 and 4 to 6 years of age (Yu et al., 2016). In line with the developmental model of empathy (Hoffman, 2000), the developmental trajectory of affective perspective taking was shown to be cross-culturally shared.

Supporting H2, children expressed more empathic concern to the majority than to the odd one out in the intragroup narrative. However, they showed similar levels of empathic concern to the in-group and out-group members in the intergroup narrative. This result suggests that for Japanese children someone who violates the group norm of harmony is more undesirable than others who are in a different peer group. This is in line with the indigenous model of group dynamics developed by Yuki and colleagues (Yuki, 2003; Yuki & Takemura, 2013) and studies focusing on cultural variations in the group dynamics (Falk, Heine, & Takemura, 2014; Snibbe, Kitayama, Markus, & Suzuki, 2003). Alternately, the lack of intergroup effect may be attributable to the content of the picture book that united the in-group and out-group members under the same group category. Activating a common superordinate identity dissipates the boundary between in-group and out-group and effectively reduces intergroup bias (Gaertner & Dovidio, 2000; Hornsey & Hogg, 2000). After the nasty wind destroys the sand mountains, the children could recognize that they were the victims of the wind regardless of their membership and felt empathetic to both in-group and out-group members.

Overall, these results supported H2 but not H1. One possibility for this result can be explained by the Japanese cultural norm about relational harmony. In the process of socialization, Japanese children learn two norms with a goal for keeping relational harmony. One is to keep harmony with others regardless of their group membership, and the other is to avoid being the odd one out among peers. In the intergroup narrative, the out-group member was depicted as a peer in the same kindergarten. In kindergartens, Japanese preschoolers are socialized to respond to a distressed peer with empathy (Hayashi et al., 2009). Although children have more empathy for in-group members, they help out-group members if there is a group norm for showing empathy for others regardless of group membership (Sierksma, Thijs, & Verkuyten, 2014). For Japanese children, being in a different peer group does not affect empathic experiences, unlike children in the Western context. However, in the Japanese cultural context, someone who deviates from the collective norm may be treated with little or no empathy.

We have two recommendations for future studies. One is to run a cross-cultural study on the development of empathy in intergroup contexts by conducting a direct comparison of children in collectivistic and individualistic cultures with a larger sample size. Because considerable variations exist among collectivistic cultures (Takamatsu & Takai, 2018) as well as among individualistic cultures (Kirchhoff, Desmarais, Putnam, & Gartstein, 2019), we recommend conducting a cross-cultural study beyond the East–West comparison. Moreover, we recommend measuring children's own feelings toward each target to test whether their emotional experiences predict affective perspective taking and empathic concern.

The other recommendation is to combine multiple methods to measure empathic responding such as behavioral neurological responses, facial expressions, and parental reports (e.g., Chisholm & Strayer, 1995; Decety, Meidenbauer, & Cowell, 2018; Rieffe et al., 2010). One concern is that, unlike children in the Western context who have been socialized to verbalize their feelings and thoughts, Japanese children are not used to explaining their feelings and thoughts with words. Japanese children perform poorly on a developmental task if the task requires verbal reports (Moriguchi et al., 2010). Neurological evidence also suggests that culture and language influence performance on a task that requires verbal responses (Kobayashi et al., 2007). Given the cultural bias of verbal tasks, future studies should combine verbal and nonverbal measures of empathy such as functional magnetic resonance imaging (fMRI) for older children (7–12 years) (Decety, Michalska, & Akitsuki, 2008) and less invasive methods (e.g., facial expressions, oxytocin, behavioral task to choose between selfish and prosocial choices) for younger children (Miller, Eisenberg, Fabes, & Shell, 1996; Strayer & Roberts, 1997).

To date, this is the first study to test culture-specific hypotheses of empathy among children who have been socialized in the collectivistic and monocultural context. Developmental psychology research with a cultural perspective will benefit the field by providing deep insights into the cultural evolution of the mind (Nielsen & Haun, 2016). Hopefully, this study will pave the way for exploring the role of culture in the development of empathy and related social constructs under the assumption that different contexts of development influence childhood social experiences.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jecp.2022.105460.

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