Children's and Adolescents' Moral Reasoning About the Fairness of Salary Allocation Based on Gender and Hierarchy

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성별 및 위계 질서에 기반한 임금 분배가 공정한가에 대한 아동과 청소년의 도덕적 사고 과정 연구

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Objective: The current study aims to examine Korean children and adolescents' understanding of equity in salary allocation, and how this develops with age. In particular, reasoning about unequal salary distribution based on *gender* and *hierarchy* is examined in this study, respectively.

Methods: Employing a social domain theoretical framework, the current study investigated a total of 60 South Korean children and adolescents' evaluation on gender- and hierarchy-based salary differentials, along with their reasoning for their fairness decisions. Participants were divided into three ages groups of 10-11 years, 12-13 years, and 15-16 years, to compare the age-related change on their evaluations regarding differential salary allocation.

Results: Findings revealed that children across age groups considered gender-based salary differentials as morally unfair; however, when salary was differed based on hierarchy (e.g., boss vs. secretary), with age children increasingly judged that the salary differential on position status is acceptable.

Conclusion: The current study suggests that as children's thinking becomes more sophisticated with age, they are better able to incorporate diverse societal issues such as hierarchy into their equity decisions, reflecting children's developing conceptions on distributive justice. This study contributes to current understandings regarding Korean children's evaluations of salary inequalities.

Keywords: fairness, social domain theory, resource allocation, salary allocation

Introduction

The quality of East Asian women's lives has been steadily improving along with their countries' fast economic growth (Lee & Park, 2011). In keeping with this, South Korea in particular, has a

relatively high Human Development Index (HDI) and Gender-related Development Index (GDI) (Lee & Park, 2011). However, South Korea is also the OECD country with the largest gender pay gap, 37.4% in 2014 (e.g., in the gender gap index, South Korea is ranked 117 out of 142 countries) (OECD, 2017). As one of

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the most economically developed countries that also faces serious concerns about gender inequality, South Korea provides an ideal place to investigate individuals' social and moral reasoning about the fairness of salary allocation.

Individuals' understanding of "distributive justice" may provide some insights on how children make fairness decisions and how this develops as they get older. Previous research on issues of distributive justice with children have shown a developmental trend; while young children judge equal distributions to be fair regardless of context, older children prefer distributing resources based on equity (e.g., merit, needs) rather than strict equality (Baumard, Mascaro, & Chevallier, 2012; Kienbaum & Wilkening, 2009; Rizzo & Killen, 2016; Schmidt, Svetlova, & Tomasello, 2016). More specifically, with age children increasingly consider unequal distributions as more fair than equal allocations in certain situations, such as when someone is poor or when someone worked harder to produce more outcome (Kenward & Dahl, 2011; Li, Spitzer, & Olson, 2014; Rizzo & Killen, 2016; Sigelman & Waitzman, 1991).

While a great deal of research has been conducted on distributive justice in general, not many studies have explored individuals' perception on distributive justice regarding *salary allocation* in particular. Even the few studies on this topic focused primarily on adult populations, which showed that adults consider effort, seniority, education, and experience as important factors when deciding whether the salary allocation is equitable (Adams, 1965; Almas, Cappelen, Sørensen & Tungodeen, 2010; Cappelen, Sørensen, & Tungodden, 2010; Oesch & Murnighan, 2003). To our knowledge, no studies thus far have investigated how *children and adolescents* view these same issues of income inequality and how their thinking changes with age. As many developmental psychologists have argued, it is important to understand how children and adolescents understand distributive justice to develop interventions early (Killen, Rutland & Yip, 2016). As Korean children live in the society where salary differentials are well-accepted norms, there is a need to fully explore how children think about this issue, and what educational input should be prompted for individuals to have a better fairness understanding about societal inequalities from an early age. Thus, the present study explored how Korean children and adolescents think about salary distribution particularly in regard to *gender* and *hierarchy*.

Our research employed social domain theory to address the

research question on children's social and moral reasoning about the fairness of salary allocation (Nucci, Turiel & Roded, 2017; Turiel, 1983, 2002). Social domain theory, one of the leading approaches in moral developmental psychology (Smetana, Jambon, & Ball 2014; Turiel, 1983), provides a useful framework for studying issues of morality and societal functioning (Arsenio, 2015). Based on over 40 years of work cross-nationally, including in South Korean samples (Kim, 1998; Park, Lee-Kim, Killen, Park, & Kim, 2012), social domain theory has shown that individuals construct three domains of social knowledge: moral, conventional, and personal (Turiel, 1983; 2002). *Morality* pertains to issues regarding justice (including distributive justice), welfare, and rights; *Social conventions* pertains to issues regarding norms and rules of a society that allow the functioning of the society, such as hierarchical structure; *Personal domain* pertains to issues on individual's own jurisdiction, such as one's preferences (Smetana et al., 2014). Social domain theory provides evidence that children have the ability distinguish moral domain from other domains from a young age (e.g., as young as 3-4 years) and regard moral rules as obligatory, universally applicable, impersonal, and independent of a group consensus (Turiel, 1983). However, when it comes to the conventional domain, with age children are found to develop more complex understanding of social norms and their functions (Midgette, Noh, Lee, & Nucci, 2016; Turiel, 1983; 2002). Given distinct developmental patterns within each domain, the aim of this study was to explore whether children's reasoning on salary inequality - an issue related to distributive justice - would undergo age-based changes distinctively for moral and societal domain. Thus, the present study explored children's fairness judgments in regard to *gender (moral domain)* and *hierarchy (societal domain)* respectively.

First, salary inequality on gender is highly related to moral issue, in a sense that connects to a larger issues of gender discrimination. Previous studies on gender have shown that South Korean children of 9- to 12-year-olds are highly critical of unfair treatments that are gender-based (Park et al., 2012). Thus, it is plausible that when it comes to salary allocation on gender, children would raise moral concerns over gender-stereotyped allocations (Conry-Murray, Kim, Turiel, 2015). In contrast, when considering social conventions surrounding hierarchy, a different pattern may be found. Prior work based on social domain theoretical perspective has found that by the time individuals reach early-middle adolescence, individuals

are able to understand convention as essential for the running and ordering of larger society, such as a hierarchical system (Almas et al., 2010; Arsenio, 2015; Arsenio, Willems, Fasteau, & Cohn, 2014; Nucci, 2009; Turiel, 1983). For instance, a recent study by Midgette et al. (2016) has revealed that Korean adolescents who are 15- to 16-year-olds are better able to understand the rationale behind social systems and conventions (e.g., calling respectful names like “uncle” to someone who is in the higher hierarchy, even if he is younger) compared to 10- to 11-year-olds and 12- to 13-year-olds. However, what is not known is whether a similar developmental trend would be revealed when individuals make a *fair allocation decision* that is related to the issues of societal systems and conventions. That is, more studies are in need to examine whether children's better understanding of societal conventions with age would relate to their better fairness thinking and acceptance of salary inequality based on hierarchy.

In addition, the current study adapts methodology which is strictly grounded on social domain theoretical framework. To have an in-depth understanding of children's and adolescents' perception on fair salary allocation, not only individual's fairness evaluations (e.g., Is this acceptable or not?) were documented but also individuals' *underlying reasonings* were explored through open-ended questions (Turiel, 1983; 2002). As each participant had the opportunity to freely express their thoughts on the given issue, this methodology allowed documentations of *what factors* individuals consider important in making fairness decisions rather than mere examination of one's ability to make fairness decisions.

Therefore, grounded on social domain theory, the current study aims to explore whether and how individuals in late adolescence are different from their younger counterparts in reasoning about salary inequality based on gender and hierarchy. This study put forth the following hypotheses:

Hypothesis 1

We expected that participants across age would read the gender-based salary allocation differential as a moral issue and evaluate it as unfair (Conry-Murray, 2017; Park et al., 2012). Thus, children would judge salary difference based on gender as unfair across ages in both their judgments and reasoning. In addition, since morality is understood to be universal and generalizable across contexts (Turiel, 1983) we expected that

children across ages would evaluate the gender-based salary allocation unacceptable in other cultures.

Hypothesis 2

We expected developmental differences in children's evaluations of hierarchy-based salary differentials. Previous research based on social domain theory has emphasized a developmental trend where individuals in late adolescence (15- to 16-year-olds) fully develop a more sophisticated understanding of societal issues, compared to those in childhood (10- to 11-year-olds) or young adolescence (12- to 13-year-olds) (Midgette et al., 2016; Nucci et al., 2017; Smetana et al., 2014). Thus, we expected that when children and adolescents made fairness judgments in regard to social systems, 15- to 16-year-olds would be more likely to judge that salary difference based on hierarchy as fair compared to 10- to 11-year-olds and 12- to 13-year-olds. Supporting their judgment, older adolescents were expected to employ more sophisticated reasoning such as ability (e.g., the boss has more ability than the secretary) compared to young children and younger adolescents.

Methods

Participants

A total of 60 children and adolescents distributed among three age groups 10- to 11-year-olds (10 boys, 10 girls: $M = 11.3$ years, $SD = .32$), 12- to 13-year-olds (9 boys, 11 girls: $M = 12.97$ years, $SD = .25$), and 15- to 16-year-olds (10 boys and 10 girls, $M = 16.05$ years, $SD = .27$) comprised the study sample. Participant ages were based on previous developmental research suggesting significant developmental differences in social and moral reasoning across these age groups (Midgette et al, 2016; Nucci et al, 2017). Participants were recruited from three public schools serving majority middle SES families. All schools were in Seoul, an urban area in South Korea. Since the overwhelming majority (88.3 %) of Koreans live in urban settings (Young & Walsh, 2011), the participants from our study were representatives of the population of South Korea.

We received Institutional Review Board approval from the 2nd

author's institution. In keeping with ethical research standards, we followed three steps for data collection: first, we received principal's permission to conduct research at each school; after obtaining school permission, parental consents from all participants were obtained prior to the administration of the study; and lastly, each child provided verbal assent prior to the interview.

Procedure and Materials

The first author and one female undergraduate researcher, who were both fluent in Korean and natives of Seoul, met with students and interviewed them individually. Interviews were conducted in Korean as participants' first language was Korean. Each interview took about 20 to 30 minutes to complete and was administered in a quiet area in the student's school (e.g., empty classroom).

Two vignettes were developed by the authors of the current study following the main methodology employed by social domain theorists (Nucci, Turiel & Roded, 2017; Smetana, Jambon & Ball, 2014). The first vignette depicted a situation of a boss deciding how to allocate salary based on the employee's gender. It was clearly depicted that both female and male workers had the exact same background. Although both workers asked for the same amount of monthly salary, the male worker received more than what he requested whereas the female worker received less than what she requested. The vignette was as follows:

Two workers have just joined a company. One is a male and one is a female, they are both 23- years-old and have both graduated from the same university. The male worker asked for 2,000,000 WON a month and the boss sees that he is capable and gives him a starting salary of 2,500,000 WON. The female worker has the same job. She also asks for 2,000,000 WON a month. But the boss thinks that it is too much because she will have children at some point and may not work as hard as a male. He tells her that 2,000,000 WON is too much, so he will give her 1,800,000 WON. He says that if she works hard, he will be open to giving her a raise once she has proven her loyalty to the company.

The second vignette depicted a situation where a boss and a secretary receive different salaries due to hierarchy within the company. It was depicted that the boss received a 5,000,000 WON salary while his secretary received a 1,000,000 WON salary due to their different roles. The complete vignette is as follows:

A worker has been part of the company for 10 years, but he is a secretary. He makes 1,000,000 WON a month. The company hires a new person in the position of the worker's boss. For his first month of work he makes 5,000,000 WON a month. Both of them work just as hard.

After hearing each story, participants responded to a set of several evaluative and probing questions, outlined below. These set of questions were asked in the same order for both vignettes.

Measures

Following each story, three dependent measures (within-subject) were assessed: a) *Children's acceptability judgments*, b) *Children's justifications regarding their acceptability judgments*, and c) *Children's cultural generalization judgments*.

Children's acceptability judgments

After hearing each story, children were asked, "Is this okay or not okay?" This question was asked to assess children's evaluation of whether salary difference based on gender or hierarchy was acceptable or not.

Children's justifications

Following children's acceptability judgments, children's justifications for their decisions were assessed by asking participants, "Can you tell me why you think like this?" This was an open-ended question. Children's justifications for their judgments were coded into distinct categories following categories found in previous research along with additional categories unique to this data (Arsenio, 2015; Conry-Murray, 2017). First, for the gender story, there were two categories: 1) emphasis on the wrongfulness of gender discrimination (e.g., "It is wrong to give more money to the male worker just because he is a male and she is not"); and 2) other (e.g., "I don't know"). Second, for the hierarchy story, there were five categories: 1) emphasis on ability (e.g., "The boss is more able; He does the work better"), 2) emphasis on effort (e.g., "He works harder"), 3) emphasis on hierarchy (e.g., "The boss is higher status than the secretary"); 4) history (e.g., "The secretary worked in the company longer than others"), and 5) other (e.g., "I don't know").

Categories that were used were assigned a score of 1, and those that were not were assigned a score of 0. Two coders completed the coding and the Interrater reliability determined using a subset of 20% of the data had a Cohen's $\kappa = .86$.

Children's cultural generalization judgments

Followed by their acceptability judgment and justification questions, children were asked whether their acceptability judgment can be generalized to different cultures. Thus, the following question was asked: "If this was in another country, would this salary difference be okay?" for both stories. This examined whether children think their judgment are valid regardless of cultural contexts.

Sample Interviews

Below are excerpts from interviews. The first interview is with a 13-year-old boy, regarding their evaluation of the Gender vignette:

Question: What do you think about this? Is it okay for a boss to give a man a salary of 2.5 million won, and a woman a salary of 1.8 million won?

Response: I do not think it's okay.

Question: Why?

Response: Women can also do good like men. Sometime men do not perform better and women can do better. It's wrong to assume that men always do better and give him more salary than her.

Question: If this same thing happened in a country other than our country, is it okay or not okay?

Response: I still don't think it's ok that they have gender differentiated salary. Because women can do as much as men. It's not good to have a stereotyped thinking that women can't work well.

The next excerpt is from an interview with a 16-year-old girl, regarding the Hierarchy vignette:

Question: What do you think about the salary difference? Is this okay or not okay?

Response: I think it is appropriate. The boss has more ability than

the secretary and this means he tried really hard. He deserves it.

Question: Why do you think there should be a salary difference?

Response: They have different status in positions. Although both work hard, boss is much capable than secretary and that's why he became the boss. That's why the salary is different.

Question: If this same thing happened in a country other than our country, is it okay or not okay?

Response: It's up to the country – there can be cultural difference. For example, North Korea is based on socialism so they could give the same amount to everyone. You should respect the culture.

Plan of Data Analysis

A set of univariate analyses of variance (ANOVA), repeated measures ANOVAs, and binominal tests were used. Specifically, univariate ANOVAs were conducted to examine differences by age group in children's acceptability judgments; repeated measures ANOVAs were conducted to examine children's justifications; and binominal tests were conducted to test whether children's acceptability responses were different from the probability of responding by chance (50%).

Results

The following results section is organized by the two main scenarios on salary allocation: gender and hierarchy. For each scenario, there are three main measures: a) children's acceptability judgments on the salary difference, b) children's justifications for their judgments, and c) children's generalizability decisions for their judgments.

Salary Differential Based on Gender

Acceptability judgments

To examine whether children think a salary difference based on gender (i.e., man receives more salary than woman due to gender) is okay or not okay, participants' acceptability judgment response (1 = *it is okay to have salary difference*; 2 = *it is NOT okay to have salary*

Table 1
Percentages for Justifications on Gender Story by Age Group

	Age Groups		
	10-11 years	12-13 years	15-16 years
Gender discrimination	100%	95%	100%
Other	0%	5%	0%

difference) were compared with the level of chance (50%) by using a binomial test. Findings showed that children's choice significantly differed from chance ($p < .001$); children across age (98.3%, $n = 60$) responded that it is NOT okay to give salary differently based on gender ($M = 1.98$, $SD = .13$). No significant age effect was revealed from the binary logistic regression.

Justifications

Participants' content-coded reasoning (1 = *gender-based differentiated salary is morally unacceptable*; 2 = *other*) were compared with the level of chance (50%) by using a binomial test. Findings showed that children's choice significantly differed from chance ($p < .001$); children (98.3%, $n = 60$) reasoned that they made the judgment because they think gender discrimination is morally wrong ($M = 1.00$, $SD = 0$; see Table 1). No significant age effect was revealed from the binary logistic regression.

Judgment generalizability

Participants' judgments of generalizability (1 = *it is okay to have salary difference in other countries*; 2 = *it is NOT okay to have salary difference in other countries*) were compared with the level of chance (50%) by using a binomial test. Findings showed that children's choice significantly differed from chance ($p < .001$); children (96.7%, $n = 58$) responded that it is NOT OKAY to give salary differently based on gender in other countries ($M = 1.97$, $SD = .18$). No significant age effect was revealed from the binary logistic regression.

Salary Differential Based on Hierarchy

Acceptability judgments

To examine the age difference in children's acceptability judgments,

Table 2
Percentages for Justifications on Hierarchy Story by Age Group

	Age Groups		
	10-11 years	12-13 years	15-16 years
Ability	10%	15%	40%
Effort	10%	45%	15%
Hierarchy	15%	5%	20%
History	35%	20%	15%
Other	30%	15%	10%

an univariate ANOVA with Age as the grouping variables and Acceptability Judgment as the dependent Variable was conducted, given that there are several justification categories. The result revealed a significant overall effect for Age, $F(2, 57) = 5.77$, $p = .005$, $\eta^2 = .17$. The result showed that 15- to 16-year-olds (the oldest age group: $M = 1.3$, $SD = .10$) were significantly more likely to respond that it is okay to have a salary difference based on hierarchy than 10- to 11-year-olds (the youngest age group: $M = 1.8$, $SD = .10$). No other age differences were found.

Justifications

Given that there were five justification categories, a 3 (Age: 10- to 11-year-olds, 12- to 13-year-olds, 15- to 16-year-olds) $\times$ 5 (Reasoning: Ability, Effort, Hierarchy, History, Other) ANOVA with repeated measures on the last factor was conducted to examine how children's justifications differed by age. An interaction effect for Age $\times$ Reasoning was found, $F(8, 228) = 2.33$, $p = .02$, $\eta^2 = .08$. The oldest age group (15- to 16-year-olds) referenced Ability ($M = .33$, $SE = .08$) at significantly higher proportions than the middle age group (12- to 13-year-olds) ($M = .10$, $SE = .08$) ($p = .043$) and the youngest age group (10- to 11-year-olds) ($M = .10$, $SE = .08$) ($p = .043$). Examples of reasoning that focused on Ability included, "Although both work hard, boss is much capable than secretary and that's why he became the boss." In addition, the middle age group (12- to 13-year-olds) referenced Effort ($M = .45$, $SE = .08$) at significantly higher proportions than the oldest age group (15- to 16-year-olds) ($M = .20$, $SE = .08$) ($p = .037$) and the youngest age group (10- to 11-year-olds) ($M = .07$, $SE = .08$) ($p = .002$). Examples of reasoning that focused on Effort included, "The boss is a higher position and he tried harder to be the higher position." Thus, the findings indicate that older adolescents were more likely

to focus on *ability* when justifying about an unequal salary distribution based on hierarchy, while the younger adolescents emphasize *effort* in the same context (see Table 2).

Judgment generalizability

No significant finding emerged in a binomial test; about 41.7% of the participants responded that it is NOT OKAY to allocate salary based on hierarchy in other countries. Thus, as expected, unlike the *Gender* context where most children judged it to be NOT OKAY to give gender-differentiated salary across cultures, children were split in their generalizability judgments regarding the Hierarchy context.

Discussion

This study set out to investigate through a social domain theoretical framework how children and adolescents reasoned about the fairness of gender-based and hierarchy-based salary allocation differentials in South Korea. The main findings are discussed below in greater detail.

Confirming our first hypothesis, we found that a great majority of participants, independent of age, evaluated gender-based salary allocation as unfair. This is consistent with previous research which suggests that Korean children are critical of gender-based inequalities (Park et al, 2012). The fact that 96.7% of participants also believed that gender-based salary allocation was not okay in other societies, also further suggests that children and adolescents are reading this situation as a moral non-arbitrary and generalizable issue (Turiel, 1983). These findings lend further support to social domain theory's assertion that regardless of culture, moral issues are regarded as universally binding across situations and independent of age (Turiel, 1983; 2002).

The almost universal rejection of gender-based differences in salary allocation complicates the picture regarding the current situation in South Korean society. Currently, South Korea has one of the highest gender-based-pay gaps (OECD, 2017); however, the current study reveals that children and adolescents are critical of such practices. Given children's and adolescents' negative evaluations of a gender-based-pay gap, it remains unclear why

adults in this same society continue to have such a large salary gap based on gender. Future research is warranted to integrate working adults' evaluations of the fairness of gender-based salary allocation in South Korean society, in order to understand the discrepancy between societal norms and individuals' moral concerns.

Consistent with our second hypothesis, older adolescents judged salary difference based on hierarchy as more acceptable compared to younger adolescents and young children. This finding supports prior social domain theoretical research which showed that 15- to 16-year-olds develop a more sophisticated understanding of societal norms and conventions, compared to 10- to 11-year-olds years and 12- to 13-year-olds (Midgette et al, 2016). The current finding is also in line with previous work on distributive justice which suggest that with age, children are better able to employ equity-based reasoning regarding issues of resource allocation (Schmidt, Svetlova, & Tomasello, 2016). As children's thinking becomes more sophisticated as they get older, they come to better understand the differences in abilities, responsibility, and difficulty for occupations (Emler & Dickinson, 1985; 2004). Thus, children's increasing acceptance of unequal salary distribution based on hierarchy can be explained by children's growing understanding of social conventions and the role of hierarchy in maintaining social systems (Midgette et al., 2016), along with their increasing understanding of equity in their distributive justice thinking (Baumard, Mascaro, & Chevallier, 2012; Kienbaum & Wilkening, 2009; Rizzo & Killen, 2016). It is noteworthy that the current study unveiled children's differentiated developmental trends in different domains: while children find gender-based salary gap as unacceptable across ages, children with age were more accepting of hierarchy-based salary gap as fair.

When examining children's justifications in depth, a developmental change in children's and adolescents' understanding of equity was also found. Importantly, there were age differences on what factors individuals regarded as important when making equitable allocation decisions based on hierarchy. That is, young adolescents were more likely to employ reasoning focused on *effort* (e.g., boss should get more salary than secretary because he worked harder) than other age groups, while older adolescents were more likely to reference *ability* (e.g., boss should get more salary than his secretary because he is more capable of doing complex work) than their younger counterparts in their open-ended responses.

Such documentation based on social domain theory allowed us to compare how rationales may vary across different age groups, even if same equitable allocation decisions were made. It is noteworthy that as Korean children age, they place a greater emphasis on an individual's ability than effort. The findings indicate that while younger children limit their equitable thinking to effort in particular, older children display a connection between the larger hierarchical system and *ability* (e.g., higher status are more capable) which comprises of diverse factors such as ability, effort, and more. Overall, the findings revealed that with age, individuals increasingly displayed more sophisticated understanding of the social structure and its relationship to fair treatment.

Further, the result on children's and adolescent's reasoning about gender- and hierarchy-based salary distribution can help inform future moral educational interventions. Our findings revealed that to make equitable decisions children need to have understandings of both distributive justice and societal organization, such as the hierarchical system. Therefore, only emphasizing issues of equality and justice would be insufficient in assisting children to be critical of societal inequalities (Nucci, 2009). In support of previous social domain theory-based interventions (Midgette, Ilten-Gee, Powers, Murata & Nucci, 2018), our findings highlighted the importance of educating Korean children about social conventions along with moral values to develop an in-depth understanding of equity.

Despite our study's novel findings and implications, this study had several limitations. The current study did not explore how participants' own family's income status might relate to children's and adolescents' social and moral reasoning. Previous research suggests that children's understanding of distributive justice regarding income differences may be connected to social class (Emler & Dickinson, 1985) and thus, future research should explore potential differences in reasoning across social classes. Secondly, this study was limited to only exploring children and adolescent, but not adults. Given the lack of research with Korean adults and their thinking on income inequality, future research needs to be done across the lifespan in order to explore potential developmental trends from young individuals who have not yet entered the work force to those who have just started working or have settled into the work force.

In sum, this study made a significant contribution to the current literature by examining the underlying rationale of Korean

children's and adolescents' evaluations of a fair salary distribution. This study provided strong evidence that Korean children and adolescents evaluate gender-based inequity as unfair based on moral reasoning, despite Korean society's large gender pay gap (Park et al, 2012). The current study also provided further support that as children's thinking becomes more sophisticated with age, children are better able to incorporate diverse societal considerations such as hierarchy into their equity decisions, reflecting children's developing conceptions of distributive justice (Conry-Murray, Kim & Turiel, 2015; Smith & Warneken, 2016). As most domain-based developmental findings have been focused on Western samples thus far, this study has a great implication in that it extends our understanding of children's moral reasoning regarding distributive justice to non-Western cultural contexts.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

References

- Adams, J. S. (1965). Inequity in social exchange. In Berkowitz, L. (Ed.). *Advances in Experimental Social Psychology* (Vol. 2, pp. 422-436). New York: Academic Press.
- Almås, I., Cappelen, A. W., Sørensen, E. Ø., & Tungodden, B. (2010). Fairness and the development of inequality acceptance. *Science*, 328(5892), 1176-1178. doi:10.1126/science.1187300
- Arsenio, W. F. (2015). Moral psychological perspectives on distributive justice and societal inequalities. *Child Development Perspectives*, 9(2), 91-95. doi:10.1111/cdep.12115
- Arsenio, W., Willems, C., Fasteau, M., & Cohn, A. (2014). *Adolescents' conceptions of institutional fairness: Connections with possible selves*. Paper presented at the annual meeting of the Jean Piaget Society, San Francisco, CA.
- Baumard, N., Mascaro, O., & Chevallier, C. (2012). Preschoolers are able to take merit into account when distributing goods. *Developmental Psychology*, 48(2), 492-498. doi:10.1037/a0026598
- Cappelen, A.W., Sørensen, E., & Tungodden, B. (2010). Responsibility for what? Fairness and individual responsibility. *European Economic Review*, 54(3), 429-441. doi:10.1016/j.euroecorev.2009.08.005
- Conry-Murray, C. (2017). Children's distributive justice: the role

- of gender norms in different settings. *European Journal of Developmental Psychology*, 14(1), 62-74. doi:10.1080/17405629.2016.1152176
- Conry-Murray, C., Kim, J. M., Turiel, E. (2015). Judgments of gender norm violations in children from the United States and Korea. *Cognitive Development*, 35, 122-136. doi:10.1016/j.cogdev.2015.04.002
- Emler, N., & Dickinson, J. (1985). Children's representations of economic inequalities: The effects of social class. *British Journal of Developmental Psychology*, 3(2), 191-198. doi:10.1111/j.2044-835X.1985.tb00971.x
- Emler, N., & Dickinson, J. (2004). Children's understanding of social class and occupational groupings. In Barrett, M. D., & Buchanan-Barrow, E. (Eds). *Children's Understanding of Society* (pp. 169-198). New York: Psychology Press.
- Kenward, B., & Dahl, M. (2011). Preschoolers distribute scarce resources according to the moral valence of recipients' previous actions. *Developmental Psychology*, 47(4), 1054-1064. doi:10.1037/a0023869
- Kienbaum, J., & Wilkening, F. (2009). Children's and adolescents' intuitive judgements about distributive justice: Integrating need, effort, and luck. *European Journal of Developmental Psychology*, 6(4), 481-498. doi:10.1080/17405620701497299
- Killen, M., Rutland, A., & Yip, T. (2016). Equity and justice in developmental science: Discrimination, social exclusion, and intergroup attitudes. *Child Development*, 87(5), 1317-1336. doi:10.1111/cdev.12593
- Kim, J. (1998). Korean children's concepts of adult and peer authority and moral reasoning. *Developmental Psychology*, 34(5), 947-955. doi:10.1037/0012-1649.34.5.947
- Lee, J. K., & Park, H.-G. (2011). Measures of women's status and gender inequality in Asia: Issues and challenges. *Asian Journal of Women's Studies*, 17(2), 7-31. doi:10.1080/12259276.2011.11666106
- Li, V., Spitzer, B., & Olson, K. R. (2014). Preschoolers reduce inequality while favoring individuals with more. *Child Development*, 85(3), 1123-1133. doi:10.1111/cdev.12198
- Midgette, A. J., Ilten-Gee, R., Powers, D. W., Murata, A., & Nucci, L. (2018). Using Lesson Study in teacher professional development for domain-based moral education. *Journal of Moral Education*. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/03057240.2018.1445982>
- Midgette, A. J., Noh, J. Y., Lee, I. J., & Nucci, L. (2016). The development of Korean children's and adolescents' concepts of social convention. *Journal of Cross-Cultural Psychology*, 47(7), 918-928. doi:10.1177/0022022116655775
- Nucci, L. P. (2009). *Nice is not enough: Facilitating moral development*. Upper Saddle River, NJ: Merrill/Prentice Hall
- Nucci, L., Turiel, E., & Roded, A. D. (2017). Continuities and discontinuities in the development of moral judgments. *Human Development*, 60(6), 279-341. doi:10.1159/000484067
- OECD (2017). *The Pursuit of Gender Equality: An Uphill Battle*. Retrieved from <https://doi.org/10.1787/9789264281318-en>.
- Oesch, J. M., & Murnighan, J. K. (2003). Egocentric perceptions of relationships, competence, and trustworthiness in salary allocation choices. *Social Justice Research*, 16(1), 53-78. doi:10.1023/A:1022926111093
- Park, Y., Lee-Kim, J., Killen, M., Park, K., & Kim, J. (2012). Korean children's evaluation of parental restrictions regarding gender-stereotypic peer activities. *Social Development*, 21(3), 577-591. doi:10.1111/j.1467-9507.2011.00643.x
- Rizzo, M. T., & Killen, M. (2016). Children's understanding of equity in the context of inequality. *British Journal of Developmental Psychology*, 34(4), 569-581. doi:10.1111/bjdp.12150
- Schmidt, M. F., Svetlova, M., Johe, J., & Tomasello, M. (2016). Children's developing understanding of legitimate reasons for allocating resources unequally. *Cognitive Development*, 37, 42-52. doi:10.1016/j.cogdev.2015.11.001
- Sigelman, C. K., & Waitzman, K. A. (1991). The development of distributive justice orientations: Contextual influences on children's resource allocations. *Child Development*, 62(6), 1367-1378. doi:10.2307/1130812
- Smetana, J. G., Jambon, M., & Ball, C. (2014). The social domain approach to children's moral and social judgments. In M. Killen & J. G. Smetana (Eds.). *Handbook of Moral Development, 2nd Edition* (pp. 23-45). New York: Psychology Press.
- Smith, C. E., & Warneken, F. (2016). Children's reasoning about distributive and retributive justice across development. *Developmental Psychology*, 52(4), 613-628. doi:10.1037/a0040069
- Turiel, E. (1983). *The development of social knowledge: Morality and convention*. New York: Cambridge University Press.
- Turiel, E. (2002). *The Culture of Morality: Social Development, Context, and Conflict*. New York: Cambridge University Press.
- Young, I., & Walsh, A. (2011). The stability of self-control among South Korean adolescents. *International Journal of Offender Therapy and Comparative Criminology*, 55(3), 445-459. doi:10.1177/0306624X09358072

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