

# Effects of Childhood Experience with Superstitious Sayings as Pedagogical Discipline upon Child Rearing

— How the Experience Affects Parental Attitude

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**Abstract :** In Japan, many superstitious sayings have traditionally been used to discipline children and motivate them to follow social rules and parental expectations. This study provides useful data for supporting parenting and parents' education, and examines the correlation between the frequency of being admonished with superstitious sayings in childhood and current child-rearing practices as parents. One hundred eighty-six Japanese parents with children in kindergarten participated in the survey. Fifteen superstitious disciplinary sayings (SDS) were presented to the participants, and their responses regarding their childhood experience of hearing each saying and the effects of those experiences on current child-rearing were evaluated. Responses to nine items on current child-rearing styles (acceptance-control), twelve items on severity of discipline, and six items on irrational causal inferences (immanent justice) were also assessed. Analysis of subjects' responses to these superstitious sayings indicated that frequency of exposure and influence on present thought life differed depending on the type of saying. Results further indicate that experiencing superstitious discipline in childhood might lead to restrictive child-rearing ideas and methods. Superstition-based discipline has been used historically in Japanese society to make obedient children. It is suggested that the fear of experiencing such control might engender restrictive child-rearing attitudes in parents, which might, in turn, lead to fear in their children.

**Keywords :** superstitious sayings for disciplining children, child-rearing styles, restrictive discipline, immanent justice, child-rearing culture

## Background

Parents' wishes for their children to be genuine, caring and obedient to social norms, have not changed since the old days. In reality, however, parents often struggle with their children's deviant behaviors and their own handling of such issues. In Japanese folklore and ritual, ogre-like demon figures called "Oni," such as "Namahage," commonly appear, admonishing and punishing wrongdoers

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(Intangible Cultural Heritage 13.COM/10.B.19, UNESCO). Some recent smart phone applications feature ogres for disciplining children. Many superstitious sayings in Japanese society (e.g., “Your tongue will grow longer if you tell a lie.”) have traditionally been used to evoke fear and motivate compliance with adults’ expectations and social norms. What effects do the experience of such superstitious threats in childhood subsequently have on the child-rearing attitudes of individuals when they become parents? This study examines the degree of childhood exposure to superstitious disciplinary sayings (SDS) among parents currently raising young children and how these experiences influence their current parenting styles. This study also aims to gather and provide useful insights for advising parents about SDS.

### **Purpose**

There are over 100 superstitious disciplinary phrases (SDS), also referred to as “threaten-ing disciplinary phrases,” commonly used in modern Japanese society (Muranishi, Yasumi, & Sekiguchi, 1996). Psychological studies on the effects of fear-provoking persuasion in children have shown adverse effects on the development of behavior suppression and internalization of values in children, and indicated immediate, but temporary obedience effects (Baumrind, 1991 ; Grusec, 2015). SDS therefore appear to have no positive, long-term effects on the development of personality traits hoped for by parents. Additionally, some researchers suggest that disciplinary phrases, such as, “You will go blind if you leave even one grain of rice uneaten” or “Your leg will be twisted if you put your feet on the dining table,” could distort children’s understanding of people with disabilities (Tokuda, 1998).

Another example — “Divine retribution will be inflicted upon you if you do something malicious” — is thought to originate from a Buddhist teaching that we incur divine punishment for any malicious act, discovered or not (Naito, 1987). This resembles Piaget’s (1932) idea of “immanent justice,” which contends that the notion of good and bad lies within people’s behavior and a belief in retribution—that bad behavior will be punished, while good behavior will be rewarded by God (Naito, 1987). Piaget’s research demonstrated that ideas of immanent justice diminished as children approached nine years of age, as their cognition decentralized. However, research on beliefs in a “just world” and the idea that we live in a “world that is equal” showed that many college students still espouse the notion of immanent justice, believing in divine retribution for malicious acts. In Japanese society, the notion of immanent justice is considered a cultural belief/value regarding how people should live rather than representing a heteronomous morality associated with cognitive constraints. Therefore, children in Japan seem to develop a concept of immanent justice influenced by their environment, including the child-rearing attitudes of their parents, and independent of their cognitive development (Shuto & Ninomiya,

2014 ; Turiel, 1983).

This study examines the degree of childhood exposure to SDS among parents currently raising young children and how these experiences influenced their daily life. Particularly, we investigate how the effects of SDS relate to their idea of immanent justice and current parenting styles.

Our hypotheses are as follows : Childhood experiences of discipline using SDS contribute to rigidity and restrictiveness of later child-rearing attitudes as parents. As SDS always entail punishment of malicious acts or wrongdoers, these experiences also negatively influence our concepts of immanent justice—beliefs that bad behavior will almost certainly be punished.

## **Methods**

### **Participants**

One hundred eighty six parents with children attending kindergarten or nursery school in commercial and residential districts of the Tokyo metropolitan area participated in the study. The primary caregiver of each child was asked to respond to the questionnaire. Respondents included 177 mothers, six fathers, one grandparent, and two unspecified, with ages between 26 and 57 (mean=37.3).

### **Questionnaire items**

Questionnaires used in this study included items about SDS, parenting styles, situational child-rearing acts, and irrational causal inferences (immanent justice), divided into the groups detailed below.

### **Superstitious disciplinary sayings**

Based on a prior study (Muranishi, Yasumi, & Sekiguchi, 1996), fifteen disciplinary phrases of admonishment, such as “If you tell a lie, your tongue will grow longer (*or* Enma will pull out your tongue),” were specified. All items are shown in Table 1. Participants were asked to rate their degree of childhood (infancy to elementary school age) exposure to each of the 15 items on a 4 point-scale ranging from 0-“never heard,” 1-“heard, but never directed at me,” 2-“sometimes directed at me,” and 3-“often directed at me.” Participants also rated the degree to which these experiences now enter their daily thoughts (degree of effect) on a 5 point-scale ranging from 0-“no memory,” 1-“some memory but seldom remember on a daily basis,” 2-“sometimes remember in daily life,” 3-“often remember in daily life” and 4-“remember on a daily basis.”

### **Parenting Styles**

Based on a prior study (Nakamichi and Nakazawa, 2003), the nine statements such as “I try to listen

to my child's talk" and "I am often too busy to do things with my child (reversed item)" were used to evaluate parenting styles along two axes: responsive/sharing (acceptance) and restriction. All items are shown in Table 2. Participants rated the degree to which each statement applied to their parenting policy and attitude on a 5 point-scale ranging from 1-"strongly disagree," 2-"disagree," 3-"neither agree nor disagree," 4-"agree," and 5-"strongly agree."

### **Situational Child-Rearing Attitudes**

The twelve items such as "My child wants to finish an entire bag of sweets" and "My child started to sing loudly while we were on a crowded train" (Shuto & Ninomiya, 2010) were derived from studies of child-rearing attitude based on social domain theory. All items are shown in Table 3. Participants rated the firmness of their discipline on a five point scale ranging from 1-"strongly disagree," 2-"disagree," 3-"neither agree nor disagree," 4-"agree," 5-"strongly agree."

### **Irrational Causal Inference (Immanent Justice)**

Six made-up stories pairing malicious acts ( $\alpha$ ) with scientifically unrelated outcomes ( $\beta$ ) were presented. Characters in the stories were children of primary to junior high school age. For example one story went as follows:  $\alpha$  "Child A found 10,000 yen on the side of the road on the way home, but instead of taking it to the police station, kept it for him/herself," and  $\beta$  "After that, A was run into by a bicycle and injured his/her leg." All stories are shown in Table 4. Participants rated the presence or absence of causality between  $\alpha$  and  $\beta$  on the following 4-point scale: 1-"no relation," 2-"may be somewhat related," 3-"related to certain extent," and 4-"clearly related."

### **Ethical Considerations**

This research was conducted anonymously. The cover of each questionnaire contained information on the purpose of the research and procedures for participating. It was clearly explained that participation was voluntary and could be terminated at any time, that responses would be kept confidential, that the information provided would be used solely for the purpose of this study, and that by submitting the form, respondents would agree to participate and consent to the terms of the study.

### **Procedures**

Questionnaires were distributed to parents and caretakers via kindergartens and nursery schools from September to October, 2018, and collected a week later through the schools (response rates 82.5%).

## Results

### Superstitious Disciplinary Sayings

Participants rated their degree of childhood exposure to discipline using SDS on a zero to three scale, and the degree to which these experiences occupied their current thought lives (degree of effect) on a zero to four scale. These values were multiplied to yield an “internalization of SDS” score (0-12) for each saying and participant. As shown in Table 1, the four most highly internalized sayings were “9. If you waste things, divine retribution will be inflicted on you” ( $M=6.18$ ); “4. If you lie down or sleep soon after eating, you will turn into a cow.” ( $M=4.61$ ); “8. If you are exposing your belly button when lightening strikes, the thunder God will take your belly button” ( $M=3.46$ ), and “15. He who makes light of one yen will cry for that yen one day (or He who will not keep a penny shall never have many)” ( $M=3.75$ ).

Furthermore, the score calculated by single factor structure the experience and effect scores were assigned as the score for internalization of SDS (0 to 180). Because the scores for internalization of SDS were single factor structure ( $\alpha$  coefficient .82), total internalization score was calculated by adding all scores of the 15 items. The overall mean value was  $M=33.56$  ( $SD=22.33$ ).

### The Parenting Styles and the Situational Child-Rearing Attitudes

#### The Parenting Styles

Based on the results of factor analysis (maximum likelihood estimation, promax rotation) of the nine questions on parenting style, two factors were extracted, just as in a prior study by Nakamichi and Nakazawa (2003). The first factor included four items, such as “I am firm with my children then it comes to discipline” and “I scold my child when he/she breaks his/her promise.” This factor was labeled “restriction” because it reflected a restrictive attitude. The second factor included five items, such as “I try to listen to my child’s talk” and “I play with my child a lot.” This factor was labeled “acceptance” because it reflected feeling of acceptance of the child. Mean acceptance and restriction scale score were obtained by dividing the sum of all rating values by the number of items (Table 2). The reliability coefficient was .71 and the mean was  $M=3.72$  ( $SD=.61$ ) for the acceptance scores while the reliability coefficient was  $\alpha=.76$  and the mean was  $M=3.75$  ( $SD=.65$ ) for the restriction scales.

#### The Situational Parenting Attitudes

Factor analysis was performed on the rating scales of the 10 items (maximum likelihood estimation,

Table 1 Means and standard deviations for experience, effect, and internalization of SDS

	Superstitious disciplinary phrases (English/Japanese)	experience <sup>(a)</sup>	effect <sup>(b)</sup>	internalization <sup>(c)</sup>
1	If you tell a lie, your tongue will grow longer ( <i>or</i> Enma will pull out your tongue).	1.19 (0.07)	0.77 (0.06)	1.41 (0.15)
2	If you play with fire, you will wet the bed.	1.17 (0.07)	0.73 (0.06)	1.34 (0.17)
3	If you whistle at night, you will attract snakes ( <i>or</i> burglars).	1.83 (0.08)	1.27 (0.08)	2.91 (0.22)
4	If you lie down or sleep soon after eating, you will turn into a cow.	2.16 (0.06)	1.91 (0.09)	4.61 (0.28)
5	If you don't finish your rice ( <i>or</i> leave even a single grain of rice), you will go blind ( <i>or</i> the God of the rice field will get mad).	0.98 (0.09)	1.15 (0.11)	2.52 (0.29)
6	If you cry, a ghost will haunt you ( <i>or</i> a policeman will come for you).	0.33 (0.05)	0.23 (0.04)	0.30 (0.06)
7	If you are undutiful or disobedient to your parents, you will have a hangnail.	1.06 (0.08)	0.83 (0.08)	1.72 (0.22)
8	If you are exposing your belly button when light- ening strikes, the thunder God will take your belly button.	2.10 (0.06)	1.45 (0.08)	3.46 (0.25)
9	If you waste things, divine retribution will be in- flicted on you.	2.27 (0.06)	2.44 (0.10)	6.18 (0.31)
10	If you cut your nails at night, you won't be with your parents when they die.	1.66 (0.07)	1.44 (0.09)	3.08 (0.26)
11	If you do not come home before dark, an ogre or a demon will take you.	0.40 (0.05)	0.34 (0.05)	0.41 (0.10)
12	If you do not use an umbrella in the rain, your hair will fall out.	0.37 (0.05)	0.38 (0.06)	0.56 (0.13)
13	If you climb up on the table, your legs will be twisted.	0.22 (0.05)	0.31 (0.06)	0.49 (0.14)
14	If you step on the entrance threshold (door sill), it is same as stepping on the head of your father ( <i>or</i> master of the household).	0.47 (0.06)	0.51 (0.07)	0.78 (0.15)
15	He who makes light of one yen will cry for that yen one day ( <i>or</i> He who will not keep a penny shall never have many).	1.49 (0.07)	1.92 (0.10)	3.75 (0.28)

<sup>(a)</sup> Scores range from 0 'never heard' ~ 3 'often being told'.

<sup>(b)</sup> Scores range from 0 'no memory' ~ 4 'remember on the daily basis'.

<sup>(c)</sup> Scores range from 0 ~ 12.

promax rotation) based on the results obtained by item analysis on the 12 items. Two items were excluded with low factor loading, as a result, three factors were extracted (Table 3). The first factor included four items, such as "When playing in a sandbox, my child began roaring and kicking down the almost-complete sand castle of another child who had put great effort into it." The items pertaining to aggressive behaviors toward individuals and groups had high loadings on the first factor, and were la-

Table 2 Results of factor analysis on parenting styles ( $n=181$ )

No.	Items	Factor1	Factor2	Mean <sup>(a)</sup>	SD
9	I am firm with my children when it comes to discipline.	<b>.752</b>	.011	3.27	0.91
7	I tell my child to do what he/she is supposed to do when he/she doesn't.	<b>.673</b>	-.078	4.26	0.83
6	I scold my child when he/she breaks his/her promise.	<b>.657</b>	.129	4.23	0.80
8	I think children should listen to their parents.	<b>.548</b>	-.048	3.29	0.78
1	I try to listen to my child's talk.	.057	<b>.724</b>	4.15	0.79
2	I play with my child a lot.	-.107	<b>.702</b>	3.71	0.83
4	I ask my child the reason why he/she acted the way did when my child did something wrong.	.193	<b>.632</b>	3.99	0.91
2	I value the time spent as a family.	-.074	<b>.556</b>	4.18	0.84
5	I am often too busy to do things with my child (reversed item).	-.253	<b>.333</b>	2.57	1.08
interfactor correlations		Factor1	Factor2		
Factor1-Restriction ( $\alpha=.76$ )		1.000	-.154		
Factor2-Acceptance ( $\alpha=.71$ )		-.154	1.000		

(a) Scores range 1 'strongly disagree' ~ 5 'strongly agree'.

beled "moral violations." The second factor included three items such as "My child began walking toward the refrigerator with chopsticks in his/her mouth during a meal." The items pertaining to manner and self-management violations had high loadings on the second factor, and were named as "conventional violations." The third factor included three items such as "When playing in the park, my child did nothing after seeing his/her kindergarten classmate crying." The items pertaining to unkindness to others had high loadings on the third factor, and were named as "prosocial violations."

The scale scores were obtained by dividing the total rating scale values by the number of items. The moral violations had Cronbach's  $\alpha=.74$ ,  $M=2.83$  ( $SD=.53$ ), the conventional violations had  $\alpha=.62$ ,  $M=2.59$  ( $SD=.52$ ), the prosocial violations had  $\alpha=.63$ ,  $M=2.00$  ( $SD=.46$ ).

### The Concept of Immanent Justice

As is evident in Table 4, causal links inferred by participants between malicious acts and scientifically unexplainable events were generally weak. The strongest reported link was for the story of a character who littered at a Shrine and later was injured falling down the stairs.

Results of factor analysis on the irrational causal inferences demonstrated that the explained first factor ratio was 67.3%, and thus had a single factor structure. The total rating scale value ( $\alpha=.90$ ) was assigned as the irrational causal inference score ( $M=1.46$ ,  $SD=.60$ ).

Table 3 Results of factor analysis on situational child-rearing attitudes ( $n=179$ )

No.	Items	Factor1	Factor2	Factor3	Mean <sup>(a)</sup>	SD
7	When playing in a sandbox, my child began roaring and kicking down the almost-complete sand castle of another child who had put great effort into it.	<b>.927</b>	-.108	-.200	3.03	0.71
6	My child was talking badly about another child who got sick and threw up in front of everybody while playing at the park.	<b>.545</b>	-.044	.166	2.75	0.69
4	When we were at the park playing on the slide in the play ground, my child cut into the line while other children were waiting their turn on the slide.	<b>.538</b>	.129	.069	2.88	0.69
5	My child started to sing loudly while we were on a crowded train.	<b>.449</b>	.151	.146	2.63	0.74
10	My child began walking toward the refrigerator with chopsticks in his/her mouth during a meal.	-.057	<b>.926</b>	-.162	3.09	0.60
9	During mealtime at home, my child walks over to the TV with his/her mouth full.	.005	<b>.620</b>	-.063	2.55	0.76
2	My child wants to finish an entire bag of sweets.	.064	<b>.335</b>	.210	2.12	0.73
11	When playing in the park, my child did nothing after seeing his/her kindergarten classmate crying.	-.033	-.232	<b>.693</b>	1.62	0.59
8	My child picked up many acorns in the park. When another child asked for one, my child didn't share a single acorn, saying "No, they are mine because I collected them."	-.053	.000	<b>.657</b>	2.01	0.61
3	When we went over to our neighbor's house, my child was given a gift. My child immediately began opening the gift without saying "thank you."	.075	.279	<b>.504</b>	2.36	0.61
interfactor correlations		Factor1	Factor2	Factor3		
Factor1-moral violations ( $\alpha=.74$ )		1.000	.543	.615		
Factor2-conventional violations ( $\alpha=.62$ )		.543	1.000	.417		
Factor3-rosocial violations ( $\alpha=.63$ )		.615	.417	1.000		
Items excluded from the factor analysis.						
1	My child began drawing a small hamster when I wanted him/her to draw a giraffe or an elephant for an animal painting competition.				0.79	0.83
12	Against my wishes, my child wants to visit another child who buys and gives out snacks to other children.				1.44	0.74

<sup>(a)</sup> Scores range 0 'have no issue' ~ 4 'forcible'.

## Relation of internalization of superstitious disciplinary phrases with the parenting styles, situational parenting attitudes, and the concepts of immanent justice

### Correlation Analysis

Correlation coefficients were calculated for the internalization of SDS score vs. the two scores pertaining to parenting styles, the three scores pertaining to situational parenting attitudes, and the concept of immanent justice score (Table 5). Scores for the internalization of SDS were significantly correlated with the restrictive parenting styles ( $r=.289, p<.001$ ), the notion of immanent justice ( $r=.198,$



Table 4 Stories of irrational causal inference and mean values of judgment on causality ( $n=171$ )

Child A		Mean (SD)
$\alpha$	A found 10,000 yen on the side of the road on the way home, but instead of taking it to the police station, kept it to for him/herself.	1.58
$\beta$	After that, A was run into by a bicycle and injured his/her leg.	(0.79)
Child B		Mean (SD)
$\alpha$	When B was scolded by his/her parents for playing video games too much, B yelled "Shut up, it's none of your business!" back at his/her parents.	1.22
$\beta$	On the following day, the bus that B was on got into an accident, and B was injured.	(0.56)
Child C		Mean (SD)
$\alpha$	C noticed an old lady standing next to him/her on the train, but because C was exhausted, C pretended not to notice and did not give up his/her seat.	1.21
$\beta$	That night, C suffered with a fever.	(0.54)
Child D		Mean (SD)
$\alpha$	D discarded some empty cans on the premises of a Shrine when no one was around to see.	1.74
$\beta$	The next day, D tripped on the stairs and sprained his/her ankle.	(0.88)
Child E		Mean (SD)
$\alpha$	E was speaking badly to everyone about a classmate that he/she disliked.	1.51
$\beta$	E could not go on the field trip that year because of illness.	(0.84)
Child F		Mean (SD)
$\alpha$	While browsing a new comic book at the book store, F carelessly tore a page by accident. F thought that he/she should tell a clerk, but instead put the book back on the shelf without telling anyone.	1.49
$\beta$	Later that day, his/her brand new bicycle was stolen.	(0.78)

<sup>(a)</sup> Scores range 1 'no relation' ~ 4 'clearly related'.

$p < .05$ ), the strictness of discipline in the settings with moral violations ( $r = .189$ ,  $p < .05$ ), the strictness of discipline in the settings where conventions were violated ( $r = .160$ ,  $p < .05$ ), and the strictness of discipline in the settings with prosocial violations ( $r = .231$ ,  $p < .01$ ).

The results of multiple regression analysis using the internalized SDS scores as independent variables are summarized in Table 6. The internalization of SDS significantly reinforced the restrictive parenting styles ( $\beta = .242$ ,  $p < .01$ ), significantly affected the strictness of discipline for violating behaviors (moral violations  $\beta = .205$ ,  $p < .01$ ; conventional violations  $\beta = .169$ ,  $p < .05$ ; prosocial violations  $\beta = .232$ ,  $p < .01$ ), and significantly reinforced the concept of immanent justice ( $\beta = .277$ ,  $p < .001$ ).

### Analysis of Variance

Participants were divided into three groups based on their internalization of SDS scores, separated at the 33<sup>rd</sup> percentile (score = 19) and 66<sup>th</sup> percentile (score = 42). As shown in Table 7, fifty four

Table 5 Relation of internalization of SDS with the parenting styles, the situational parenting attitudes, and the concept of immanent justice

	Mean	SD	A. ISDS	B. accepting	C. restrictive	D. immanent justice	E. moral	F. conven- tional
A. internalization of superstitious disciplinary sayings (ISDS)	33.32	22.76						
B. accepting parenting styles	3.71	0.60	.029					
C. restrictive parenting styles	3.75	0.63	.289***	-.253**				
D. immanent justice concept	2.81	0.52	.198*	-.121	.197*			
E. strictness of discipline in the moral violations	2.61	0.50	.189*	-.153	.307***	-.011		
F. strictness of discipline in the conventional violations	1.99	0.42	.160*	-.182*	.350***	.084	.409***	
G. strictness of discipline in the prosocial violations	1.88	0.66	.231**	-.157	.349***	.206*	.467***	.295***

$n=152$

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

Table 6 Results of multiple regression analysis with SDS as independent variables

			$\beta$ coefficient	
			parent's age	internalization of superstitious disciplinary words
parenting style	acceptance	$F_{(2, 164)}=0.14$	.028	.028
	restrictive	$F_{(2, 166)}=5.12^{**}$	-.015	.242**
immanent justice concept		$F_{(2, 157)}=7.17^{***}$	-.123	.277***
strictness of discipline	moral	$F_{(2, 163)}=3.60^*$	.006	.205**
	conventional	$F_{(2, 161)}=2.33$	-.017	.169*
	prosocial	$F_{(2, 165)}=4.72^{**}$	.007	.232**

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

participants were in the low-internalization group ( $M=11.83$ ,  $SD=4.82$ ), 61 were in the medium-internalization group ( $M=26.85$ ,  $SD=6.13$ ), and 61 in the high-internalization group ( $M=59.49$ ,  $SD=15.56$ ). Results of one-way factorial ANOVA indicated that the main effect of the internalized group was significant in the restrictive parenting style ( $F_{(2, 173)}=6.91$ ,  $p < .001$ ), strictness of discipline in the settings where norms were violated ( $F_{(2, 168)}=3.16$ ,  $p < .05$ ), and the notion of immanent justice ( $F_{(2, 161)}=6.40$ ,  $p < .01$ ). As shown in Figure 1, the mean restrictive parenting style score was greatest for the high-internalization group, followed, in order, by the medium internalization group and low-internalization group. As shown in Figure 2, strictness of discipline in settings where norms were violated was highest for the high-internalization group, followed, in order, by the medium-internalization group and low-internalization group. As shown in the Figure 3, the notion of immanent justice was

Table 7 Mean values for the parenting styles, the strictness of discipline, and immanent justice by internalization of SDS (ISDS) group (high, medium, low)

three groups by 33 percentile		scores of ISDS	parent's age	parenting style		strictness of discipline			immanent justice concept
				acceptance	restrictive	moral	conventional	prosocial	
Low	<i>n</i>	54	53	54	54	54	54	53	50
	MEAN	11.83	35.91	3.74	3.51	2.71	2.54	1.92	1.33
	SD	4.82	4.29	0.62	0.74	0.55	0.57	0.38	0.44
Medium	<i>n</i>	61	57	59	61	58	60	60	54
	MEAN	26.85	37.79	3.65	3.73	2.82	2.52	1.96	1.31
	SD	6.13	4.87	0.56	0.61	0.53	0.46	0.37	0.41
High	<i>n</i>	61	59	61	61	60	57	61	60
	MEAN	59.49	38.02	3.73	3.95	2.90	2.74	2.06	1.64
	SD	15.56	4.82	0.65	0.56	0.49	0.50	0.51	0.73
Total	<i>n</i>	176	169	174	176	172	171	174	164
	MEAN	33.56	37.28	3.71	3.74	2.82	2.60	1.98	1.44
	SD	22.33	4.74	0.61	0.66	0.53	0.52	0.43	0.58
$F_{(2, 161-173)}$		332.73	3.36	0.36	6.91	1.89	3.16	1.62	6.40
		$p < .001$	$p < .05$	n.s.	$p < .001$	n.s.	$p < .05$	n.s.	$p < .01$

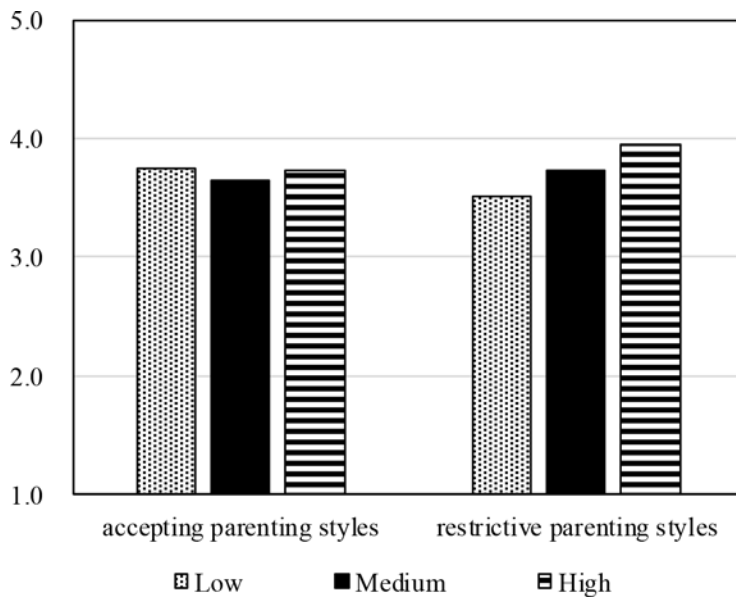


Figure 1 Mean values of parenting styles by internalized SDS group

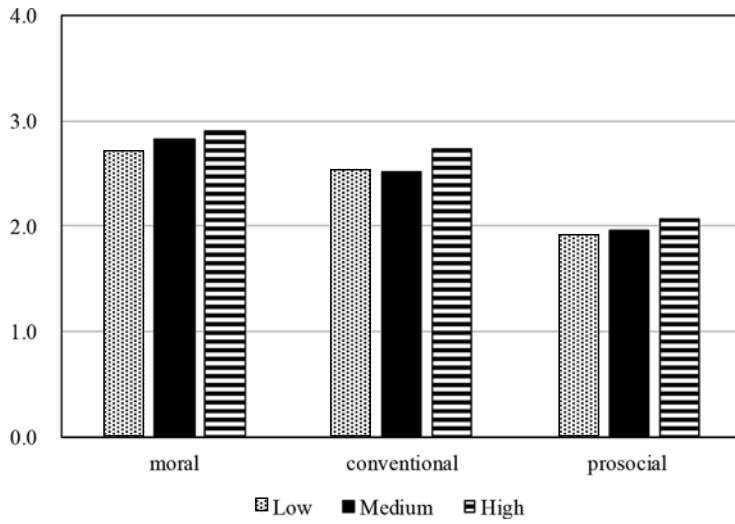


Figure 2 Mean values of discipline strictness by internalized SDS group

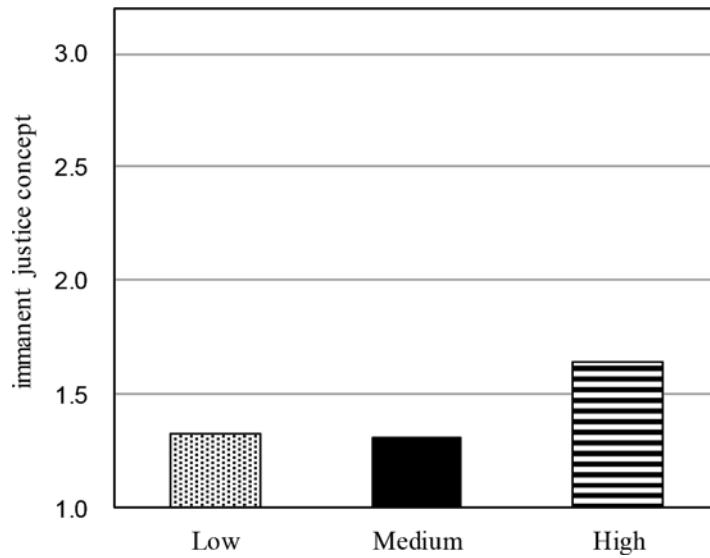


Figure 3 Mean values of immanent justice concept by internalized SDS group

strongest for the high-internalization group, followed by the low-internalization group and middle-internalization group, in that order.

**Discussion**

Although the parents in this study had some childhood experience with discipline through supersti-

tious sayings, effects on their current thought lives were not notable. While internalization of SDS does not relate to receptive parenting style, the more SDS parents internalize, the more they tend to control their children. Moreover, analysis of situational parenting attitudes demonstrated no effect of exposure to SDS on aggressive behaviors considered malicious regardless of situation and no effect on prosocial behaviors left to the discretion of the individual. However, the effects of SDS were evident in responses to social norm violations for which judgments of right and wrong were situationally dependent. As with the results for the restrictive child-rearing style, the more parents internalized SDS, the more strict they became in their discipline in conventional social contexts. Furthermore, parents who internalized superstitious disciplinary sayings showed a greater tendency to speculate superstitiously in linking malicious behaviors to scientifically unrelated outcomes in the made-up stories on the questionnaire.

## **Conclusion**

These results suggest that when superstitious phrases are used for discipline in childhood, these children, on becoming parents themselves, tend to employ a more restrictive parenting style, and retain irrational reasoning regarding the outcomes of malicious behaviors. SDS have been handed down from generation to generation in Japanese culture as words of wisdom for making children more obedient. However, fears associated with this type of discipline may contribute to restrictive child-rearing as a parent, which, in turn, may instill feelings of fear in their children, given the parents' irrational ways of thinking.

Social domain theory on morality suggests that children better develop autonomy when parents interpret the intentions behind their behaviors, recognize these meanings in each context, and adjust authority to facilitate personal discretion in behavior (Shuto & Ninomiya, 2014). The results of this study suggest that SDS suppress moral autonomy in children.

It has long been suggested (Baumrind, 1991 ; Grusec, 2015) that disciplining children by means of threat has that outweigh autonomy adverse effects on the development of long term independence and autonomy temporary effects of behavior suppression in children. This study on the effects of SDS supports these findings. Its results also suggest that discipline through threat negatively affects intergenerational transmission. The danger of using superstitious sayings in discipline should be acknowledged throughout society via community- and school-based awareness-raising activities for parents.

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## References

- Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. *Journal of Early Adolescence*, 11(1), 56-95.
- Grusec, J.E. & Davidov, M. (2015). Analyzing socialization from a domain-specific perspective. In J.E. Grusec and P.D. Hastings (Eds.), *Handbook of socialization : theory and research* (2nd ed., pp-158-181). New York : Guilford.
- Muraishi, S., Yasumi, K., & Sekiguchi, J. (1996). Study of “disciplinary words” for young children. *Bulletin of the Tokyo College of Domestic Science*, 36(1), 121-130.
- Nakamichi, K. & Nakazawa, J. (2003). Maternal / paternal childrearing style and young children’s aggressive behavior. *Bulletin of The Faculty of Education, Chiba University*, 51, 173-179.
- Naito, T. (1987). Relation between the idea of immanent justice of children and the attitude of care-takers : in a case of farming are of Japan. *The Japanese Society of Social Psychology*, 3(1), 29-38.
- Shuto, T. & Nimomiya, K. (2010). *Conceptions of Personal Autonomy in Family Relationships in Japan*. At the annual convention of American Psychology Association 2010, San Diego, CA.
- Shuto, T. & Ninomiya, K. (2014). Maternal Cocepts of “Personal Autonomy” as a Social Context of Children’s Moral Development. *The Japanese Journal of Developmental Psychology*, 25, 356-366.
- Tokuda, K. (1998). Shituke kotoba no shinriteki eikyō — odoshi no shituke kotoba to syougai rikai no kankei — [Psychological effects of disciplinary words — relationship between disciplinary words with threat and understanding of disability]. Tohken Co., 10, 19-24. (in Japanese)
- Turiel, E. (1983). *The development of Social Knowledge : Morality and convention*. New York : Cambridge University Press.