

Perceived academic competence, parental differential
treatment, and sibling relationship quality
in Indian and Dutch children

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Perceived academic competence, parental differential treatment, and sibling relationship quality in Indian and Dutch children

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Abstract – In this study, we examined the influence of perceived academic competence on parental differential treatment (PDT) and the influence of PDT on sibling relationship quality. Cross-cultural comparisons between Indian and Dutch children on these concepts and their influences were also made. Participants were 165 Indian and 360 Dutch children in the age of 10 to 12 years. To collect data on the three concepts, questionnaires were administered. Analyses revealed cross-cultural differences in the average scores on PDT and sibling relationship quality, with significantly higher scores for Indian children. We found no significant influence of perceived academic competence on parental differential treatment. Regarding the influence of PDT on sibling relationship quality, results revealed a significant influence of parental differential affection on warmth/closeness in the sibling relationship for the Dutch children, but not for the Indian children. The need for further research, especially cross-cultural research, is emphasized.

Samenvatting – In deze studie is gekeken naar de invloed van ervaren academische competentie op verschil in behandeling door ouders (*parental differential treatment, PDT*) en naar de invloed van *PDT* op de kwaliteit van de siblingrelatie. Crossculturele vergelijkingen tussen Indiase en Nederlandse kinderen op deze concepten en hun invloeden zijn ook gemaakt. De participanten waren 165 Indiase en 360 Nederlandse kinderen, tussen de 10 en 12 jaar oud. Bij hen zijn vragenlijsten afgenomen om informatie over de concepten te verzamelen. Uit de analyses bleek dat er crossculturele verschillen waren in de gemiddelde scores op *PDT* en op de kwaliteit van de siblingrelatie, waarbij significant hogere scores werden gerapporteerd door Indiase kinderen. Verder bleek ervaren academische competentie niet van invloed te zijn op *PDT*. Wat betreft de invloed van *PDT* op de kwaliteit van de siblingrelatie, wezen de resultaten uit dat een verschillende affectie door de ouders van invloed was op de warmte/intimiteit in de siblingrelatie. Deze invloed gold voor de Nederlandse kinderen, maar niet voor de Indiase kinderen. De noodzaak van verder, met name crosscultureel, onderzoek wordt benadrukt.

Key-words: perceived academic competence, parental differential treatment, sibling relationship quality, cross-cultural differences.

Introduction

Cultures are often said to be either individualistic or collectivistic. Individualistic cultures value the person as independent from relationships, community and social order, and as motivated to reach personal goals (Killen & Wainryb, 2000). Moreover, individualism views group membership and social relationships in terms of choice and mutual approval (Raeff, Greenfield, & Quiroz, 2000). Collectivistic cultures, by contrast, value individuals according to their interdependent roles in the social system (Killen & Wainryb, 2000). Collectivism views social relationships as links that determine interdependence and reciprocal obligations (Raeff et al., 2000). However, according to Killen and Wainryb (2000), this individualism-collectivism dichotomy results in the mislabelling of both cultures and individuals. It also incorrectly assumes that these two concepts are mutually exclusive. Another way to view different cultures is to see them as having more individualistic or more collectivistic elements (Killen & Wainryb, 2000). For example, the Dutch culture is said to consist of more individualistic elements, whereas the Indian culture is believed to consist of more collectivistic elements. This more individualistic or collectivistic nature of a culture affects the socialization process and the character of social relations (Greenfield, 1994).

In the present research, we will focus on three concepts and their influences: (1) perceived academic competence; (2) parental differential treatment (affection and control); and (3) sibling relationship quality (warmth/closeness and conflict). We will also examine whether there are cross-cultural differences between Indian and Dutch children regarding these concepts.

Previous studies have linked different factors with parental differential treatment (PDT). PDT is seen as children's perception that parental behaviours (i.e., affection and control) are being directed unequally toward them and their sibling (Kowal & Kramer, 1997). In previous studies PDT was associated with sibling dyad-specific characteristics (e.g., sibling age gap, sex constellation, and temperamental difference) (Atzaba-Poria & Pike, 2008). Additionally, PDT was associated with stressful family environments, marital dissatisfaction, large family size, single parenthood, and low SES (Jenkins, Rasbash, & O'Connor, 2003). Despite this large amount of factors, we know little about the relationship between PDT and individual child characteristics, such as a child's perceived academic competence (i.e., self-perception of their academic competence). However, it is possible that academic competence has an influence on PDT in cultures with more collectivistic elements. In a study of Chao (1995), Chinese mothers explained that the Chinese culture traditionally had emphasized that

academic success is the best way for a child to honour his or her family. The same relation between academic success and family honour probably exists in the Japanese culture. Schneider, Hieshima, Lee, and Plank (1994) found in their interviews with Japanese-American participants that a tacit understanding exists between the parents and the child about the value of education. This makes the child to do his/her very best, so (s)he can bring the family honour through successful academic performance. Schneider et al. (1994) further found that Japanese-American parents do not explicitly monitor homework assignments. Similarly, they do not directly place demands on their children to get good grades. Rather, these expectations and values are transmitted indirectly and symbolically. It is therefore possible that there is no (strong) relationship between academic competence and parental control. A relation between academic competence and parental affection may be more likely, because affection can be a more implicit (i.e., tacit) way to express approval. The study of Schneider et al. (1994) was about absolute parenting, defined by how an individual child is actually treated by his/her parents. According to Tamrouti-Makkink, Dubas, Gerris, and Van Aken (2004) children not only respond to absolute parenting, but also to how this treatment is perceived in relation to their sibling (i.e., PDT). Because India is an Asian culture with more collectivistic elements, like China and Japan, it is conceivable that the same patterns in academic competence and family honour exist in India. It is also possible that in India these patterns lead to a stronger influence of academic competence on parental differential affection than on parental differential control.

In the Netherlands, the Dutch ethnic majority values academic success less than the minorities coming from cultures with more collectivistic elements (i.e., Turkish, Moroccan, Chinese, and Creole cultures) (Deković & Pels, 2006; Herweijer & Vogels, 2000). According to Rao, Cheng, and Narain (2003), culturally determined views about the value of education influence parents' behaviour towards their children. It is therefore possible that when academic success is less emphasized, it will not have such a large impact on parenting. Because of this, it is conceivable that the influence of academic competence on PDT is less strong in the Netherlands than it is in India.

More research has been done about the influence of parental differential treatment on sibling relationship quality (as defined by varying degrees of warmth/closeness and conflict in a child's relationship with his or her sibling). It is thought that PDT creates negativity in the sibling relationship by inducing feelings of rivalry and anger. Sensitive parenting, however, often requires differential treatment (Brody, 1998). Fortunately, children may view differences in their age, personal attributes, and needs as factors justifying PDT (Kowal &

Kramer, 1997). However, this justification probably does not hold for differential affection. It is therefore possible that parental differential affection has a larger impact on the sibling relationship quality than parental differential control. Indeed, Shanahan, McHale, Crouter, and Osgood (2008) found that youth whose parent-child relationships decreased in warmth compared to those of their sibling, also reported decreases in sibling warmth. So, it appears that parental differential warmth has a negative relation with warmth/closeness and a positive relation with conflict in the sibling relationship, whereas this relation is less strong for parental differential control.

McHale, Updegraff, Shanahan, Crouter, and Killoren (2005), however, argued in their study with Mexican American families, that this negative relation between PDT and the sibling relationship quality may not be apparent in contexts in which communal (i.e., collectivistic) rather than individualistic values prevail. In societies with more collectivistic elements, familism is more present. Familism emphasizes family responsibilities and the needs and interests of family members. This concern for the group may make adolescents less inclined toward social comparisons with their siblings and less likely to perceive unequal treatment as an indication that they are unloved or less valued by their parents (McHale et al., 2005). So, following this reasoning, PDT could have a stronger effect on sibling relationship quality in individualistic than in collectivistic cultures. McHale et al.'s study (2005) was about adolescents, but the same cultural patterns may exist for children. It is therefore essential to compare these processes in more collectivistic and more individualistic societies.

The present study extends existing research, because we still know little about the influence of a child's perceived academic competence on PDT. More research has been done about the influence of PDT on sibling relationship quality, but this influence is possibly not the same in the Indian and Dutch culture. The three research questions examined in this study are therefore: (1) To what extent is parental differential treatment influenced by perceived academic competence in 10 to 12 year old children?; (2) To what extent is sibling relationship quality influenced by parental differential treatment in 10 to 12 year old children?; (3) Are there cross-cultural differences between Indian and Dutch children concerning these concepts and their influences?

With respect to the first and third research question we expect a stronger influence of academic competence on PDT in the Indian sample than in the Dutch sample. Additionally, regarding the Indian sample we expect a stronger influence of academic competence on parental differential affection than on parental differential control. With respect to the second and third research questions it is hypothesized that in the Dutch sample, the sibling

relationship quality is more influenced by parental differential affection than by differential control. Moreover, we expect that PDT influences warmth/closeness in the sibling relationship negatively and conflict in the sibling relationship positively. Regarding the Indian sample, the influence of PDT on sibling relationship quality is possibly less strong than in the Dutch sample.

Method

Participants

This study had a cross-sectional design and made use of a select sample. The Indian participants were from three English Medium Schools in Pune, India. With help of researchers from Jnana Prabodhini's Institute of Psychology in Pune, the principals of the three schools were contacted for participation. All of them agreed to take part in this research. Because of unreliable data, 18 children had to be removed from the sample. Therefore, a total of 165 Indian children stayed involved in this study. Data from 360 10 to 12 year old Dutch children were already collected in the Netherlands in 2006.

Of the Indian sample 46.7% were boys and 52.7% were girls. Of the Dutch sample 51.1% were boys and 48.9% were girls. This gender distribution did not differ significantly between the two groups, $\chi^2(1, N = 524) = 0.78, p = .38$. Of the Indian children, 51 were in 5th standard (30.9%), which is comparable with 7th grade in the Netherlands (48.3% of the Dutch participants). A total of 114 Indian children were in 6th standard (69.1%), which is comparable with 8th grade in the Dutch sample (51.7%). The Indian children were on average younger ($M = 10.96, SD = 0.67$), than the Dutch children ($M = 11.19, SD = 0.69$), $t(330.22) = -3.60, p < .05$. Also, more Indian participants were only child (21.2%) compared to the Dutch participants (7.8%), $\chi^2(1, N = 524) = 19.60, p < .05$. Finally, 68.5% of the Indian children did not speak English at home, 26.1% spoke English at home in combination with one or more (local) Indian languages, and 3.0% spoke only English at home.

Procedure

The Indian children were asked to fill in a questionnaire about themselves, their parents, friends, siblings, and school. First, a pilot study was done with three boys and three girls from 6th grade. After this pilot study, some small alterations in the questionnaire were made. Before administering the questionnaires, instructions were given through example questions. While

filling in the questionnaires, the children could ask questions. When the children were finished, it was checked whether they had filled in the questionnaire completely. Data of the Dutch children were already collected using the same questionnaire (and some additional parts) in Dutch. These questionnaires were administered at ten selected primary schools in the Netherlands during two days, one hour each day. Advanced letters were sent to the schools, after which the principals of the schools were contacted by telephone. Parents were also informed about the research, and could refuse participation of their child. The questionnaires were administered at the Dutch schools in a similar way as at the Indian schools. After the administering of the questionnaires, both Indian and Dutch participants received a little present.

Measurement of Constructs

Perceived academic competence. The Competence Perception Scale for Children (CBSK) is a Dutch version of the Self Perception Profile for Children (SPPC, Harter, 1982 as cited in Veerman, Ten Brink, Straathof, & Treffers, 1996) and is used to measure an 8 to 12 year old child's self-concept. The SPPC consists of six subscales, from which one is used in this study, namely academic competence. Each scale includes six items, which are formulated as bipolar statements, for example, "some children do very well in school" but "other children do not do that well in school". The child first has to pick up the statement that fits best to him or her. Then he/she has to indicate if the chosen statement is "a little bit true for me" or "totally true for me". The scale scores were calculated by computing the mean of the scores of the six items (ranging from 1 to 4). The questions were scored in such a way that a higher score indicated a higher degree of perceived competence (Veerman et al., 1996). Due to unreliability of answers, data from 20 children were removed from the Indian sample when analysing the influence of academic competence on PDT. The internal consistency of the academic competence subscale was satisfactory for the Indian sample ($\alpha = .64$) and good for the Dutch sample ($\alpha = .78$).

Parental differential treatment. The Sibling Inventory of Differential Experience (SIDE) asks siblings to compare their experiences in four domains (Daniels & Plomin, 1985). The SIDE includes nine items on differential parental treatment, which are used in the present study. The items were answered separately for fathers and mothers, and assessed two main factors: affection and control (Daniels & Plomin, 1985). The affection scale contains five items and the control scale includes four items (Kowal & Kramer, 1997). Each SIDE item was answered on a 5-point scale. For example, my father/mother: "has enjoyed doing things with

us” (affection scale) or “has punished us for our misbehaviour” (control scale). These statements can be answered with 1 = *toward sibling much more*, 2 = *toward sibling a bit more*, 3 = *same toward my sibling and me*, 4 = *toward me a bit more*, or 5 = *toward me much more*. The scale scores were calculated by computing the mean of the item scores. The reliability scores for the affection scales were good, with alpha’s of .72 and .82 for respectively the Indian paternal and maternal scales, and alpha’s of .87 and .82 for the Dutch paternal and maternal scales. The paternal control scale for the Indian sample was insufficient (alpha = .57), and the maternal scale was satisfactory (alpha = .61). For the Dutch sample, both reliability scores were good, with an alpha of .82 for the paternal control scale, and an alpha of .75 for the maternal control scale.

Sibling relationship quality. The Sibling Relationships Questionnaire (SRQ) (Buhrmester & Furman, 1990) uses 42 items to assess the nature of a child’s relationship with his/her sibling. The children have to fill in on a 5-point Likert-type scale (from 1 = *hardly at all* to 5 = *extremely much*) how prevalent various qualities are in their sibling relationship (Fox, Barrett, & Shortt, 2002). Two factors of the SRQ were used in this study, namely warmth/closeness (21 items) and conflict (9 items). Children were asked to answer for example “How much do you and this sibling love each other?” (warmth/closeness factor) or “How much do you and this sibling argue with each other?” (conflict factor). To create the two factors, the mean of the scores on the items for that particular factor was computed. The internal consistency of the warmth/closeness subscale was good with an alpha of .86 for the Indian sample and an alpha of .94 for the Dutch sample. The reliability score of the conflict scale was satisfactory for the Indian sample (alpha = .67) and good for the Dutch sample (alpha = .86).

Results

The three research questions examined in this study were (1) To what extent is parental differential treatment influenced by perceived academic competence in 10 to 12 year old children?; (2) To what extent is sibling relationship quality influenced by parental differential treatment in 10 to 12 year old children?; (3) Are there cross-cultural differences between Indian and Dutch children concerning these concepts and their influences?

The presentation of results begins with discussing the descriptive statistics of the three concepts. Cross-cultural comparisons on these three concepts were also made. For these

comparisons, independent samples t-tests were used. The remaining of the results is organized around the three research questions. First, the influence of academic competence on parental differential treatment was examined. After that, it was investigated if PDT had an influence on sibling relationship quality. Cross-cultural comparisons regarding these two influences were also considered. To test these influences, while controlling for the child's age and gender, hierarchical regression analyses were used.

Table 1
Descriptive Statistics for Study Variables

	India			Netherlands			<i>t-value</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	
Perceived academic competence	133	2.83	0.61	349	2.82	0.62	0.17
Parental differential treatment							
Affection							
Father	122	3.36	0.77	326	3.03	0.46	4.48**
Mother	130	3.33	0.84	329	3.10	0.49	2.87**
Control							
Father	127	3.06	0.72	327	2.93	0.48	1.87
Mother	129	3.06	0.73	326	2.91	0.50	2.21*
Sibling relationship quality							
Warmth/closeness	96	3.66	0.62	299	3.05	0.70	7.60**
Conflict	113	2.84	0.73	310	2.70	0.78	1.62

* $p < .05$. ** $p < .01$.

Perceived Academic Competence, Differential Parental Treatment, and Sibling Relationship Quality

The descriptive statistics of the independent and dependent variables, and the results of the t-tests can be found in Table 1. There was no significant difference in the average score on perceived academic competence between the Indian and Dutch sample. Regarding the four types of parental differential treatment, Indian children scored significantly higher on paternal differential affection, maternal differential affection, and maternal differential control compared to the Dutch children. The Indian and Dutch children did not score significantly different on differential control from fathers. This means that the Indian children feel that they get more affection than their sibling compared to the Dutch children. Additionally, they

experience more control from their mother than their brother or sister, compared to Dutch children. Concerning the sibling relationship quality, the Indian participants scored significantly higher on the warmth/closeness scale compared to the Dutch participants. This means that in comparison with the Dutch children, the Indian children felt more warmth and closeness in their relation with their sibling. Regarding the conflict scale, they scored similar.

Table 2

Summary of Hierarchical Regression Analysis for Variables Predicting Parental Differential Affection and Control

	India				Netherlands			
	Differential Affection		Differential Control		Differential Affection		Differential Control	
	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2
<u>Father</u>								
<i>Step 1</i>		.01		.02		.00		.00
Age	.11		-.11		-.03		-.04	
Gender	.05		.05		-.06		.01	
<i>Step 2</i>		.03		.01		.00		.00
Age	.10		-.12		-.03		-.05	
Gender	.06		.05		-.05		.00	
Perceived academic competence	.17		.07		.06		-.02	
<u>Mother</u>								
<i>Step 1</i>		.01		.02		.00		.01
Age	.04		-.12		.00		-.07	
Gender	-.05		-.07		-.01		-.02	
<i>Step 2</i>		.02		.00		.00		.00
Age	.03		-.12		-.00		-.07	
Gender	-.05		-.07		-.02		-.03	
Perceived academic competence	.14		.01		-.05		-.02	

* $p < .05$.

Perceived Academic Competence Predicting Parental Differential Treatment

To test the influence of perceived academic competence on parental differential treatment while controlling for age and gender, hierarchical regression analyses were conducted.

Control variables (age and gender) were included in Step 1, and perceived academic competence was entered in Step 2. Questions about parental differential affection and control were answered separately for fathers and mothers. So, for both the Indian and Dutch sample, four hierarchical regression analyses were carried out.

The analyses revealed that for both samples, academic competence was not a significant predictor of the four types of parental differential treatment (i.e., paternal and maternal differential affection and paternal and maternal differential control) (see Table 2). The models (see Table 2) also could not explain a significant amount of variance in the four types of PDT for both Indian and Dutch children.

Table 3

Summary of Hierarchical Regression Analysis for Variables Predicting Sibling Relationship Quality

	India				Netherlands			
	Warmth/ Closeness		Conflict		Warmth/ Closeness		Conflict	
	B	ΔR^2	B	ΔR^2	β	ΔR^2	β	ΔR^2
<i>Step 1</i>		.03		.01		.00		.01
Age	-.15		.09		.00		.04	
Gender	.07		-.00		.06		-.10	
<i>Step 2</i>		.07		.06		.12*		.01
Age	-.13		.09		.02		.04	
Gender	.05		.00		.07		-.10	
Paternal differential affection	.17		.23		.26*		.02	
Maternal differential affection	.00		-.28*		.16*		.02	
Paternal differential control	.16		-.06		.10		-.05	
Maternal differential control	-.01		.20		.06		.12	

* $p < .05$.

Parental Differential Treatment Predicting Sibling Relationship Quality

To examine the influence of parental differential treatment on sibling relationship quality, hierarchical regression analyses were conducted. To control for age and gender, these variables were included in Step 1. The four types of parental differential treatment (i.e., paternal and maternal differential affection, and paternal and maternal differential control) were entered as predictors in Step 2. Regression analyses were carried out separately for warmth/closeness and conflict in the sibling relationship.

Table 3 presents a summary of the hierarchical regression analyses. Concerning the Indian sample, none of the four types of PDT turned out to be a significant predictor of the warmth/closeness factor. With regard to the Dutch sample, paternal and maternal differential affection had a significant influence on the warmth/closeness scale of the sibling relationship ($\beta = .26$ and $\beta = .16$ respectively). This means that higher levels of differential affection predicted more warmth and closeness in the sibling relationship, with differential affection from fathers having the greatest influence.

Regarding the conflict factor of the sibling relationship, the two models in both Indian and Dutch sample could not explain a significant amount of variance. However, in the Indian sample, maternal differential affection turned out to be a significant predictor of the conflict factor ($\beta = -.28$). So, the analyses revealed that for the Indian sample, the models could not explain a significant amount of variance of both warmth/closeness and conflict in the sibling relationship quality. Regarding the Dutch sample, the four types of PDT did not explain a significant amount of variance of the conflict factor, but they did explain a significant amount of variance (i.e., 12%) of the warmth/closeness factor.

Discussion

In the present study, three research questions were examined: (1) To what extent is parental differential treatment influenced by perceived academic competence in 10 to 12 year old children?; (2) To what extent is sibling relationship quality influenced by parental differential treatment in 10 to 12 year old children?; (3) Are there cross-cultural differences between Indian and Dutch children concerning these concepts and their influences? This section begins with discussing the average scores of the Indian and Dutch sample on the three concepts. After that, the results regarding the three research questions will be discussed.

Regarding the average scores on the three concepts, Indian and Dutch children scored similarly on perceived academic competence. The scores on parental differential treatment (PDT) however, differed between the two samples. In this study, four types of PDT were distinguished, namely paternal and maternal differential affection and control. The Indian participants scored significantly higher on paternal and maternal differential affection, and on maternal differential control. This means that the Indian children feel more affection and maternal control than their sibling compared to the Dutch children. It is a striking finding that the Indian children felt more parental differential treatment (regarding three of the four types) than the Dutch children, because it was thought that children from more collectivistic cultures perceive less PDT. This thought was based on the study of McHale et al. (2005), in which they argued that familism in societies with more collectivistic elements may make adolescents less inclined toward social comparisons with their siblings. This makes them less likely to perceive unequal treatment as an indication that they are less valued or loved by their parents. So, they are less likely to perceive differential affection and possibly also other types of PDT. This line of reasoning, however, was based on research regarding Mexican American adolescents, and it is conceivable that it will not hold for Indian children. Like Mexico, India is a society with more collectivistic elements, but the norms, habits, and beliefs are quite different. Moreover, the patterns are possibly different for children and adolescents. More research is needed to investigate McHale's arguments. Especially cross-cultural research is needed, to test the universality of the patterns. To know more about the reasons why Indian children scored higher on three of the four types of PDT, qualitative research can be helpful, including in-dept interviews with children and parents.

Regarding sibling relationship quality, the Indian children scored higher on the warmth/closeness scale than the Dutch children. On the conflict scale, they scored the same. This means that the Indian participants felt more warmth and closeness in the relationship with their sibling compared to the Dutch children. An explanation for this can be that there are still stronger ties among relatives in Indian families than in individualistic societies (Rao, McHale, & Pearson, 2003). Moreover, according to Arends-Tóth and Van de Vijver (2008), a strong family orientation is usually related to a strong attachment to the family members. They also argued that family members in collectivistic societies have attitudes, feelings, and behaviours of loyalty, connectedness, obligations, responsibility, and solidarity for each other. This loyalty, connectedness, and solidarity may explain why the Indian children felt more warmth and closeness in their sibling relationship compared to the Dutch children.

After examining the average scores on the three concepts, the first research question (i.e., whether PDT is influenced by perceived academic competence) and cross-cultural differences regarding this influence were investigated. It was hypothesized that in the Indian sample, perceived academic competence would have a stronger influence on parental differential affection than on parental differential control. It was also hypothesized that the influence of perceived academic competence on PDT would be less strong in the Netherlands than in India. The results, however, revealed that perceived academic competence was not a significant predictor of any of the four types of PDT. The hypothesis specific for the Indian sample was based on research with Chinese- and Japanese-American participants (Chao, 1995; and Schneider, 1994 respectively). India, however, is quite different from both countries. Chinese and Indian parents for example, may differ in the expectations they hold for their children's achievement because of Confucian and Hindu thoughts. In China, nurture is more emphasized than nature. All children can do well with effort, regardless of their innate ability. In contrast, Indians emphasize nature more than nurture. They recognize the value of effort, but they may be more accepting of individual differences because of their belief in predetermined tendencies (Rao, McHale, et al., 2003). This belief can be a reason that no influence of perceived academic competence on PDT was found, because there are fewer motives to treat a child different because of academic competence, when one recognizes that this ability is not completely due to the child's effort. It was also hypothesized that there would be a weaker influence of perceived academic competence on PDT in the Netherlands, because in this country, academic success is less emphasized. The results revealed that there is no influence of academic competence on PDT in the Netherlands. This pattern was the same in the Indian sample, so contrary to the hypothesis, no cross-cultural differences regarding this influence were found.

The second research question asked whether parental differential treatment has an influence on sibling relationship quality. Cross-cultural comparisons regarding this influence were also made. It was hypothesized that the influence of PDT is less strong in India than in the Netherlands. It was argued that because of familism, Indian children probably do not compare themselves with their siblings and therefore do not experience much PDT. For the Dutch sample, it was hypothesized that the sibling relationship quality was influenced more by parental differential affection than by parental differential control. Furthermore, it was expected that more parental differential affection would lead to less warmth and closeness and more conflict in the relationship between siblings.

Regarding the Indian sample, results revealed that none of the four types of PDT could explain a significant amount of variance in either the warmth/closeness and conflict factor. Because some significant influences were found in the Dutch sample, these results are in line with the hypothesis. It might be that in India, the strong family ties, and the feelings and behaviours of loyalty, connectedness, and solidarity have a stronger influence on the sibling relationship quality than PDT has. It is also possible that these characteristics of more collectivistic societies serve as a buffer for the influence of PDT on the sibling relationship quality. Further research is needed, taking into account the amount and strength of family ties and of feelings and behaviours of loyalty, connectedness, and solidarity among family members in different countries.

As was expected for the Dutch sample, results revealed that maternal and paternal differential affection had a significant influence on warmth/closeness in the sibling relationship, whereas maternal and paternal differential control did not. Regarding sibling conflict, none of the four types of PDT turned out to be a significant predictor. Contrary to what was expected for the Dutch sample, it was found that more paternal and maternal differential affection leads to more warmth and closeness in the sibling relationship. These two predictors contributed significantly to the 12% variance which was explained by the model. The hypothesis was based on the thought that PDT creates negativity in the sibling relationship by inducing feelings of rivalry and anger (Brody, 1998). Other research also found that more differential affection leads to less positivity in the sibling relationship, but they found this relation only for children receiving *less* affection compared to their sibling (McHale, Updegraff, Jackson-Newsom, Tucker, and Crouter, 2000; Shanahan et al., 2008). The Dutch children felt on average that they received more affection than their sibling. It is possible that for them the negative relationship does not hold. The same can be true regarding differential conflict. The Dutch children felt on average that they received *less* control compared to their sibling. The finding that more differential affection leads to more conflict in the sibling relationship (Brody, 1998), probably only holds for children who feel that they are treated less favourable (i.e., for children who feel that they receive *more* control than their sibling). Another situation in which children perceive differential treatment, but still report positive sibling relationships was found by Kowal and Kramer (1997). They stated that more differential treatment was related to more warmth and closeness in the sibling relationship when children explained this differential treatment by using the sibling's need attribution. McHale et al. (2000) also investigated the mediation role of fairness ratings of children regarding PDT. In line with the study of Kowal and Kramer (1997), they found that a child's

rating of the fairness of differential treatment was more consistently associated with the sibling relationship quality than was PDT per se. However, they also found that parental differential warmth was an exception to this finding. They further argued that there is probably not a single, universal process that can describe the way in which fairness ratings mediate the relation between PDT and sibling relationship quality. This means that more research is needed regarding this relationship. It is valuable to include fairness ratings of PDT in further research, as well as the notion whether a child feels that it is treated favourable or unfavourable compared to his/her sibling. The result that differential affection from fathers had a stronger influence on the sibling relationship quality than differential affection from mothers is according to Shanahan et al. (2008) in line with previous research, which suggested that siblings may be more sensitive to differential treatment from fathers than from mothers. So, it is useful to look at PDT separately for fathers and mothers.

Several limitations of the present research need to be addressed. Firstly, we used non-probability sampling. Because the questionnaire was in English, all Indian children came from English Medium schools. These children also came predominantly from urban middle and high class families living in Pune. This makes it difficult to generalize the findings of this study. A second limitation is the cross-sectional design. With regression analyses, influences of variables can be approached, but the pattern of influence might also be the other way around. Thirdly, this study made only use of children's self-reports. Regarding PDT, however, this is not necessarily a limitation. According to McHale et al. (2000), even when parents treat their children equal (i.e., no PDT), this can still have negative implications, when the child *perceives* this equal treatment as unfair. On the other hand, real and perceived academic competence may differ and may therefore have a different influence on PDT. It is possible to include teacher's reports or a questionnaire for children that ask about 'real' academic competence (e.g., marks or IQ-test items). Because academic competence may influence the behaviour of the parents (i.e., PDT), it might also be interesting to include the parent's view about the academic competence of their child.

A fourth limitation concerns the language and probably also cultural difficulties. The language problems appeared, because the questionnaire was in English and for most of the Indian children, this was not their mother tongue. Further, the Indian participants were not accustomed to filling in questionnaires. Moreover, the Indian children were very enthusiastic about the questionnaires, and were therefore probably not as concentrated as expected. These issues resulted in the deletion of some questionnaires that were filled in unreliably. It is also possible that the different concepts meant something else for the Indian children compared to

the Dutch children. In her dissertation, Wang (2003) argued that parental warmth for example might have another meaning in different cultures. The expression of parental warmth may therefore be different in these countries. It is possible that the questions which should be asked to get the most reliable data of the concepts are different for Indian and Dutch children. More cross-cultural research is needed to clarify these possibilities. The above-mentioned points of criticism can also be found in the reliability scores of the Indian and Dutch sample. For all variables, Cronbach's alpha was lower for the Indian sample than for the Dutch sample. But, except for paternal differential control, all alpha's were still satisfactory or good.

A lot of the limitations previously mentioned reflect the difficulties that play a role in cross-cultural research. It makes cross-cultural research more difficult but also more interesting, varied, and challenging. Because of the importance of cross-cultural research, one of the strengths of this research is that it compared Indian and Dutch children. Indeed, differences in concepts and influences between Indian and Dutch children were found.

For further studies, it would be interesting to compare same-sex and mixed-sex sibling dyads, because they may differ in their ratings of fairness of differential parental involvement (McHale et al., 2000), and maybe also in other domains of PDT. And, as was mentioned earlier, ratings of fairness might play an important role in the relation between PDT and sibling relationship quality. Results of McHale et al. (2000) further suggest that it is worth focusing on the developmental level of the sibling when investigating PDT (see also Kowal & Kramer, 1997). Birth order may also be worth taking into account, because the relation between PDT and the sibling relationship quality may be different for earlier-born and later-born children (Kowal & Kramer, 1997). Additionally, it might be interesting to look at the relationship between all siblings instead of looking only at the relationship of the two siblings closest in age, as was done in this study.

Despite the limitations, this study has shown that it is important to look at the influence of perceived academic competence on parental differential treatment, and of PDT on sibling relationship quality in a cross-cultural context. Cross-cultural research is needed, because it contributes to our knowledge about the universality of patterns. It will also help researchers to find out if a certain characteristic is universal for all cultures with more individualistic or collectivistic elements. The characteristic may namely also be specific for a certain society. McHale et al. (2005) for example, found less PDT in Mexican-American adolescents. To explain this finding, they used characteristics of more collectivistic cultures. India, however, is also a culture with more collectivistic elements, but the Indian children did experience PDT, in three of the four types even more than the Dutch children. So, the

reasoning of McHale et al. (2005) obviously does not hold for all cultures with more collectivistic elements. To study the universality of patterns, research in more countries is necessary. There is no clear picture yet about the influence of academic competence on PDT, and there is no consensus about the influence of PDT on the sibling relationship quality. Further research is needed to get a clearer picture about the three concepts and their influences, especially in a cross-cultural context.

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