Bachelor Thesis: Cross-Cultural Differences in Parent-Child Relationship Quality and Internalizing and Externalizing Problem Behaviour

Esther M. Karkdijk
Utrecht University

Abstract

Aim The aim of the present study was to examine differences between three countries with dissimilar safety levels in the affective quality of the parent-child relationship and internalizing and externalizing problem behaviour, and the link between these concepts. **Method** In this study, 262 Icelandic, 299 Dutch and 298 Indian early adolescents participated, with a mean age of 10.9 years old. Items of the Network of Relationship Inventory (NRI) and the Youth Self Report (YSR) were used to measure negative interaction, support, depression and aggression. Rankings on the Global Peace Index (GPI) were used to measure the safety level of a country. **Results** Significant differences between Icelandic, Indian and Dutch samples were found. Indian adolescents reported more negative interaction with both parents, whereas Icelandic adolescents reported more support. Dutch adolescents reported less aggression and depression. Across all three countries, a significant link between parent-child negative interaction, but not support, and adolescent problem behaviour was found. We did not find a moderating effect of the country in the link between affective quality of the parent-child relationship and adolescent internalizing and externalizing problem behaviour. **Conclusion** This study shows that cultural differences in parental support and negative interaction and in adolescent aggression and depression exist and that negative interaction is positively linked to adolescent depression and aggression. These results are found in three different countries of dissimilar safety levels, which suggests that the safety level of a country does not influence the link between negative interaction and adolescent problem behaviour.

Keywords: adolescents, support, conflict, internalizing, externalizing.

Cross-Cultural Differences in Parent-Child Relationship Quality and Internalizing and Externalizing Problem Behaviour

The development of a child is influenced by various factors, as pointed out in the ecological theory of Bronfenbrenner (1992). This theory states that a child's development is affected by various interacting systems in which children are embedded. The microsystem is the system in which the child interacts directly. The connection between structures within the microsystem is included in the mesosystem. The exosystem includes the larger social system which has an indirect impact on the child's development by interacting with the microsystem. Finally, the macrosystem includes the ideological and institutional patterns of the particular (sub)culture (Clarke-Stewart & Parke, 2011).

The microsystem is the most closely related to the child. According to Bronfenbrenner's theory, parents are part of the microsystem and therefore influence the development of the child. One important parental aspect for the development of the child is the affective quality of the relationship between parent and child. Affective quality of the parent-child relationship is often defined as consisting of two separate yet related aspects: 1) perceived warmth and support, and 2) antagonism and negative interaction.

Family relationships are found to be important antecedents for adolescent problem behaviour (Buist, Dekovic & Gerris, 2011). During adolescence, the parent-child interaction often changes with a decrease of warmth and an increase of conflict between parents and adolescents (Coleman & Hendry, 1999), partly due to the increasing need for autonomy during adolescence (Erikson, 1986). Moreover, both internalizing and externalizing problem behaviour increases in prevalence during adolescence (Moffitt, 1993; Wolff & Ollendick, 2006). This makes the adolescence an interesting age period to focus on.

When investigating the link between the affective quality of the parent-child relationship and adolescence development, the concept attachment is often used. Attachment is an important aspect of the affective quality and is closely related to emotional warmth and support within the parent-child relationship. Children who are securely attached, are confident about the parent's responsiveness, availability and reliability to serve as a secure base (Clarke-Stewart & Parke, 2011). To develop a secure attachment, parents should be sensitive and responsive towards their child (Ainsworth et al., 1978). Sensitiveness and responsiveness are important aspects of the affective quality of the parent-child relationship, which shows the correspondence between attachment and emotional warmth and support.

The link between attachment and early adolescent development has been widely investigated. Rice (1990) concluded in a review on literature about attachment and adolescent development that parent-adolescent attachment is related to social performances of adolescents, in particular social competence. Furthermore, attachment was positively associated with emotional adjustment. Results from various studies indicate a link between high quality of parent-child attachment and less

adolescent internalizing and externalizing problem behaviour (Buist, Dekovic, Meeus & Van Aken, 2004; Muris, Meesters & Van Den Berg, 2003; Raja, McGree & Stanton, 1992). This suggests that the affective quality of the parent-child relationship is an important predictor for both externalizing and internalizing problem behaviour of early adolescents, which are in this study defined as aggression and depression. For example, a lack of communication and trust in the parent-child relationship, as perceived by the adolescent, is associated with more delinquent and aggressive adolescent behaviour (Buist, Dekovic, Meeus & Van Aken, 2004). Also, high levels of parental support are found to be a significant factor in predicting less adolescent alcohol abuse and delinquency (Barnes & Farrell, 1992).

Furthermore, studies have shown that conflictive and hostile parent-child interaction is related to more adolescent problem behaviour **(**Barber & Delfabbro, 2000; Beam, GilRivas, Greenberger, & Chen, 2002). For example, psychological parental control is associated with higher levels of depression (Pettit, Laird, Dodge, Bates & Criss, 2001). Moreover, negative parent-child interaction is also linked to increased externalizing problem behaviour (Buist, Dekovic & Gerris, 2011). Adolescents who experience low hostility of their parents, have significantly fewer externalizing problems (Scaramella, Conger & Simons, 1999). Adolescents who experience hostile and coercive interaction with their parents, are at increased risk for experiencing externalizing behaviour problems during adolescence. These results show the importance and need of including the parent-child relationship in the investigating of adolescence problem behaviour, which is already often done by many researchers and therapists.

However, most of the theories and studies mentioned in the discussion above are based on data of Western participants. It is unclear whether these results can be generalized to various cultural groups. There are reasons to examine whether this is the case, because there are important differences between the Western culture and other, non-Western cultures (Henrich, Heine & Norenzayan, 2010).

It is important to involve the cultural context when investigating the link between the affective quality of the parent-child relationship and adolescent problem behaviour. As pointed out before, the theory of Bronfenbrenner states that the development of the child is influenced by various interacting systems. This means that the microsystem, including the parents, and the macrosystem, including culture, reciprocally interact and both have an effect on the adolescent's development. Dominant cultural beliefs and values and safety-issues therefore influence the parents and adolescent, as suggested in the *cultural values model.* This model stresses that the link between parenting behaviour and adolescent outcomes differ between cultures, because of the connection between parental aspects and culture (Lamborn & Felbab, 2003). This process is further explained by the *developmental niche* (Super & Harkness, 1986). This framework proposes that cultural differences lead to different *parental ethnotheories* (Super & Harkness, 1986). Parental ethnotheories are the ideas of parents about the development, value and role of the child and about parenting. According to this framework,

parental ethnotheories are influenced by the dominant (sub)culture and influence the way parents treat their child (Super & Harkness, 1986). Recent studies show that parent-child interactions across different cultures indeed differ in quality, function and meaning (Harkness & Super, 2006; Trommsdorff & Kornadt, 2003.).

Furthermore, besides parenting, culture may influence adolescent problem behaviour. Core values of a culture influence the development of problem behaviour. In the study of Bergeron and Schneider (2005), 28 different cultures were compared and this led to the conclusion that differences in levels of aggression between societies could be explained by different cultural core values of the societies. These findings show that core values of a culture may explain differences in the levels of aggression between cultures to some extent (Bergeron & Schneider, 2005).

Thus, cultural differences influence the parent-child relationship and adolescent behaviour. Cultures differ various dimensions. An often mentioned cultural difference is the degree of individualism or collectivism of a culture. As Killen & Wainryb (2000) point out: 'Societies can be characterized as being somewhere on the continuum between the poles of individualism and collectivism or independence and interdependence.' At the one pole, individualism, independence is prioritized. On the other pole, in a collectivistic culture, a person is valued by his or her interdependent roles in society (Killen & Wainryb, 2000). However, there are more important cultural influences that should be taken in account in investigating the link between the affective quality of the parent-child relationship and adolescent problem behaviour. One of these major differences between countries is the degree of societal and personal safety. This has often been ignored while investigating cross-cultural differences in this link. However, the degree of safety might explain some of the cross-cultural differences in the affective quality of the parent-child relationship and adolescent problem behaviour. Therefore, this study will focus on countries with a dissimilar safety level while examining cross-cultural differences.

The way in which a society deals with internal conflicts, such as corruption and education issues, and external conflicts, such as hostility to foreigners, is indicated to be linked to the dominant value orientations within that society (Fisscher & Hanke, 1995). The study of Basabe and Valencia (2007) pointed out that socio-structural dimensions of a culture of peace are coherently associated with cultural values, subjective well-being and trust. Moreover, there is a positive consistent link between emphasizing values like harmony, hierarchy and intellectual autonomy and peace within a country (Fisscher & Hanke, 1995).

Because of the link between safety and core values of a culture, it could be suggested that the safety level influences the parental belief systems, which are related to the affective quality of the parent-child interaction. For example, parents in a peaceful society are likely to emphasize trust (Basabe & Valencia, 2007), whereas it is plausible that parents in a threatening environment place a higher value on safety and monitoring. Moreover, it could be suggested that in a fearful and/or

threatening environment, parents are more stressed and have less time or energy to play and talk with children than parents in a safe and peaceful environment. Furthermore, it is likely that they feel that they have to be stricter towards their children. Thus it can be speculated that parents in a peaceful environment express more support and less negative interaction towards their children than parents in a threatening environment do. As discussed earlier, parental ethnotheories influence the way parents treat their children and this parent-child interaction is linked to adolescent problem behaviour. Therefore, it can be assumed that differences in parental ethnotheories, due to dissimilar safety levels, lead to differences in the parent-child interaction, which results in differences in adolescent behaviour.

Besides these cultural differences, according to the cultural values model the effect of parenting behaviour on adolescent behaviour differ across cultures, because of the different value structures. The suggested explanation for these variations is that behaviour is interpreted differently in varying cultural contexts (Lamborn & Felbab, 2003). It is likely that these variations also occur due to dissimilar safety levels. For example, strict monitoring in unsafe environments might be crucial for a child's well-being, but it does not serve this protective function in safer environments (Lamborn, Dornbusch & Steinberg, 1996). Furthermore, adolescents exposed to violence are more likely to experience stress or depressive symptoms. Parental support is found to be a protective factor in this link (Ozer & Weinstein, 2004). Thus, low affective quality of the parent-child interaction might have a stronger effect on the behaviour of adolescents who live in a country with a lower safety level, because they are already at higher risk of developing problem behaviour.

In this study, three countries of dissimilar safety levels will be compared: Iceland, the Netherlands and India. The Global Peace Index ranked Iceland since 2008 as number 1 out of 163 (Institute for Economics and Peace, 2016). Iceland is therefore rated as having a 'very high' state of peace, the Netherlands with number 19 as 'high' and India with number 137 as 'low'. This suggests major differences in safety between these three countries, which makes it possible to investigate differences between countries of dissimilar safety levels.

This study aims to investigate the presumed link between affective quality of the parent-child relationship, support and negative interaction, and externalizing and internalizing early adolescent problem behaviour, aggression and depression. In addition, this study aims to investigate whether there are differences between countries of a dissimilar safety level in the affective quality of the parent-child relationship and in early adolescent internalizing and externalizing problem behaviour. Furthermore, this study aims to investigate whether there are differences between countries of dissimilar safety levels in the link between the affective quality of the parent-child relationship and early adolescent problem behaviour.

Based on the previous described studies, we expect to find the affective quality of the parent-child relationship to be a predictor of internalizing and externalizing adolescent problem behaviour. Therefore, we expect to find a significant negative link between support of the parent and internalizing

and externalizing adolescent problem behaviour and a significant positive link between negative parent-child interaction and internalizing and externalizing adolescent problem behaviour. Furthermore, we expect to find significant differences between support and negative interaction, and adolescent internalizing and externalizing problem behaviour. We expect to find a moderating effect of the country on the link between the affective quality of a parent-child relationship and internalizing and externalizing adolescent problem behaviour. Specifically, we expect the effect of the affective quality of the parent-child relationship on adolescent problem behaviour to be stronger in a country with a lower safety level.

Methods

Procedure and participants

In this study, new data has been collected at six Icelandic primary schools (grade 6). This data set was used as an extension to an already existing dataset about Dutch and Indian early adolescents. The procedure of the new data collection was similar to the procedure in India and the Netherlands. The schools were invited by a letter to participate in this research. This letter contained explanation of the nature of the research, some information about how the data will be treated and information about the researchers. Six Icelandic primary schools, fifteen Dutch primary schools and six Indian English middle schools indicated they were willing to participate. After this, parents were informed about the questionnaire by e-mail or letter. A passive consent procedure was applied to ask permission of the parents (they could send an e-mail or write a note if they did not want their child to participate).

The children received instructions before they completed the survey. They were told that anonymity was guaranteed and that they could stop filling out the survey at any point. This instruction was conducted in the native language of the children. During the time that the children filled out the questionnaire, at least two researchers and a teacher were present to assist the children if they did not understand a question. Children with dyslexia or concentration problems were personally assisted by a teacher.

The Icelandic schools were located in different places. All the schools were located in small towns, with a population of 2,300 to 8,200 inhabitants. In the Netherlands, the population size of the school towns was very diverse: from large cities (with population more than 100,000) to small towns (with population between 2,000 and 8,500). In India, schools were located in Pune (population more than 3,000,000), the second largest city of the State of Maharashtra.

Participants of this study include $N = 262$ Icelandic, 299 Dutch and 298 Indian early adolescents. Their age varied from 10 to 12 years old, with a mean age of 10.9. Information about the samples can be found in Table 1. A Pearson's chi-square test was conducted to evaluate whether the differences between the samples were significant. The chi-square test for percentage boys was statistically significant, χ^2 (2, $N = 745$) = 9.25, $p = 0.01$. The percentage boys in was the largest in the Indian sample. The chi-square test for percentage divorced or separately living parents was also

statistically significant, χ^2 (2, N = 745) = 56.51, p < .001. This percentage was the largest in the Icelandic sample.

Table 1. *Means, Percentages and Pearson's Chi-Square Test for Sample Characteristics of Icelandic, Dutch and Indian Samples*

	Iceland	The Netherlands	India	χ^2
Total participants	262	299	298	
Percentage boys	52.5	50.5	53.7	9.25*
Percentage divorced/separately living parents	31.8	13.9	1.3	55.51**

* $p < 0.05$

** $p < 0.01$

Measures

The affective quality of the parent-child relationship. Twelve items of the Network of Relationship Inventory (NRI; Furman & Buhrmester, 1985, 1992) were used to measure support and negative interaction. The questionnaire consisted of six items about support and six items about negative interaction for each parent. All items were rated along a 5-point Likert scale (1 = *little or none* to 5 = *the most*). An example of an item of the *Support* scale is: "How much does your mother help you figure out or fix things?". A sample item of the *Negative interaction* scale is: "How much do you and your father get upset with or mad at each other?". The Cronbach's alphas of both scales for father and mother in the different samples were all satisfactory and can be found in Table 2.

Problem behaviour. Two scales of the Youth Self Report (YSR, Achenbach 1991; Verhulst, Van der Ende & Koot, 1996) were used to measure aggressive and anxious-depressed behaviour. Early adolescents answered 33 questions about their own behaviour. All items were rated along a 3-point Likert scale (1 = *not true,* 2 = *somewhat or sometimes true,* and 3 = *very true or often true*). The *Aggression scale* consists of 19 items (e.g., "I scream or yell a lot"). The *Anxiety/depression* scale consists of 14 items (e.g., "I feel lonely"). The Cronbach's alpha of both scales in all samples were all sufficient and can be found in Table 2.

Table 2. *Cronbach's Alpha of the Icelandic, Dutch and Indian Samples*

	Iceland	The Netherlands	India
NRI			
Support father	.80	.84	.71
Support mother	.76	.80	.70
Negative interaction father	.88	.86	.70
Negative interaction mother	.94	.84	.76
YSR			
Aggression	.73	.83	.67
Anxiety-depression	.80	.83	.72

Safety level. Data of the safety level of a country was obtained by using the Global Peace Index (Institute for Economics and Peace, 2016). This data can be found online on www.visionofhumanity.org. The most recent data available was used, which was data from 2017. The GPI is based on three categories: measures of social safety (e.g., "number of homicides"), measures of militarization (e.g. "number of heavy weapons") and measures of ongoing domestic and international conflict security (e.g. "number of deaths from organized conflict). These categories consist of 24 quantitative and qualitative indicators of existence or absence of peace. Countries are scored on their safety level from 1 to 4 and are ranked on state of peace, along a scale of '*very high', 'high', 'medium', 'low'* and '*very low'*. In 2017, Iceland was ranked as '*very high*', the Netherlands as '*high*' and India as '*low*'.

Results

Cross-cultural differences in the affective quality (support and negative interaction) of the parent-child relationship and internalizing and externalizing adolescent problem behaviour.

The first aim of this study was to investigate whether the Icelandic, Dutch and Indian early adolescents differed significantly in their mean scores on the affective quality of the parent-child relationship as well as on internalizing and externalizing problem behaviour.

A Multivariate Analysis of Variance (MANOVA) was used to examine these differences. Before conducting the MANOVA, the data were examined using SPSS Statistics to ensure all of its underlying assumptions were met. Univariate normality was assessed with Shapiro-Wilk tests and boxplots. Although the boxplots suggested normality, the assumption could not be assumed according to the outcome of the Shapiro-Wilk tests. Furthermore, multivariate outliers were found in the data, opposing the assumption of multivariate normality. Correlations between the dependent variables were not excessive, indicating that multicollinearity was not of concern. Additionally, the relationships that

did exist between the dependent variables were roughly linear. However, Box's *M* was significant at α = .001, indicating that homogeneity of variance-covariance matrices could not be assumed.

Although not all underlying assumptions were supported by the data, conducting a MANOVA was still admissible, given the purpose of this study. Z-scores of the whole sample were used to simplify the comparing of the MANOVA-results. The results of these analyses can be found in Table 3.

Table 3. *Multivariate Analysis of Variance (MANOVA) Results of Z-Scores of Parent-Child Relationship Quality, and Externalizing and Internalizing Problems Between Iceland, The Netherlands and India.*

	Iceland (n = 257)	Netherlands (n = 254)	India (n = 223)	F	*P*	η2
Father-child relationship						
Support	.14[a]	-.09[b]	-,05[ab]	3.80	.023	.010
Negative interaction	-.26[a]	-.03[a]	.34[b]	22.81	.000	.059
Mother-child relationship						
Support	.12[a]	-.00[ab]	.34[b]	3.39	.034	.009
Negative interaction	.06[a]	-.08[a]	-.11[b]	15.12	.000	.040
Problem behaviour						
Aggression	-.06[a]	-.45[b]	.57[a]	73.52	.000	.167
Depression	.16[a]	-.50[b]	.36[a]	55.88	.000	.133

Note: Different superscripts reflect significant post-hoc differences.

The Icelandic, Dutch and Indian early adolescents reported significantly different on negative interaction in their relationship with both father and mother. Furthermore, significant differences were found in father-child support and mother-child support. Finally, the adolescents reported significantly different on aggression and depression.

Post-hoc Bonferroni testing revealed that the Indian participants reported significantly more negative interaction with their father and mother, compared to the Dutch and Icelandic participants. Furthermore, the Icelandic participants reported significantly higher than the Dutch participants on support father and they reported significantly higher than the Indian participants on support mother. Finally, the analyses showed that the Dutch participants reported significantly less depression and aggression than the Icelandic and Indian participants. The remaining pairwise comparisons were not significant.

Associations between the affective quality of the parent-child relationship and adolescent internalizing and externalizing problem behaviour.

The second aim of this study was to investigate the association between the affective quality of the parent-child relationship and adolescent internalizing and externalizing problem behaviour. To estimate this association, two standard multiple regression analyses (MRA) were performed, for the variables depression and aggression.

Several assumptions were evaluated before conducting the MRA. First, stem-and-leaf plots and boxplots indicated that four variables in the regression were normally distributed, except the variables negative interaction father and negative interaction mother. Second, inspection of the normal probability plot of standardised residuals indicated that that the assumption of normally distributed residuals was met. However, inspection of the scatterplot of standardised residuals against standardised predicted values indicated non-normality, which suggested that the assumptions of normality, linearity and homoscedasticity of residuals could not be met. Third, Mahalanobis distance exceed the critical value, which raises concern about multivariate outliers. Finally, relatively high tolerances for all predictors in the regression model indicated that multicollinearity would not interfere with our ability to interpret the outcome of the MRA.

Although not all assumptions could be met, the MRA could still be conducted given the purpose of this study. In combination, the predictors negative interaction father, negative interaction mother, support father and support mother accounted for a significant 17% of the variability in aggression, $R^2 = .17$, adjusted $R^2 = .16$, $F\ (4, 729) = 36.24$, $p < .000$. Unstandardized (*B)* and standardized (β) regression coefficients, and squared semi-partial (or 'part') correlations (sr^2) for each predictor for aggression are also reported in Table 4. The variables negative interaction father and negative interaction mother had a significant effect on aggression, which means that early adolescents who report more negative interaction with their parents, are also like to report more aggression.

Table 4. *Unstandardized (B) and Standardised (β) Regression Coefficients, and Squared Semi-Partial Correlations (sr^2) for Each Predictor in a Regression Model Predicting Aggression and Depression.*

	Aggression			Depression		
Variable	*B* [95% CI]	β	sr^2	*B* [95% CI]	β	sr^2
Support father	-.01 [-.04, .02]	-.03	.00	.00 [-.04, .04]	.00	.00
Support mother	-.02 [-.05, .01]	-.05	.00	-.02 [-.06, .02]	-.04	.00
Negative interaction father	.05 [.02, .09]	.14*	.01	.03 [-.01, .08]	.07	.00
Negative interaction mother	.11 [.08, .14]	.29*	.06	.13 [.10, .17]	.28*	.05

Note. $N = 734$. CI = confidence interval

* $p < .01$.

The second MRA was performed to investigate the link between the affective quality of the parent-child relationship and adolescent depression. Because this analysis consisted of the same predictors as the MRA discussed before, a second evaluation of the assumptions was not necessary. Although not all assumptions could be met, it was still possible to conduct the MRA for this purpose.

The predictors negative interaction father, negative interaction mother, support father and support mother accounted in combination for a significant 11% of the variability in depression, R^2 = .11, adjusted R^2 = .11, F (4, 729) = 22.60, p < .000. Unstandardized (*B)* and standardized (β) regression coefficients, and squared semi-partial (or 'part') correlations (sr^2) for each predictor for depression are reported in Table 4. Only the variable negative interaction mother had a significant effect on depression, which means that more negative interaction with mother predicts more adolescent depression.

The moderating effect of the safety-level of a country on the link between the affective parent-child relationship and externalizing and internalizing adolescent problem behaviour.

The third aim of this study was to examine the moderating effect of country on the link between the affective parent-child relationship and externalizing and internalizing adolescent problem behaviour. To investigate the moderation effect of a country, PROCESS regression analysis was used. PROCESS is a tool for conducting moderation and mediation analyses, written by Andrew Hayes (2012). The moderating variable in this analysis was country. The results of the analysis of the predictors of aggression are reported in Table 5. The results of the analysis of the predictors of depression are reported in Table 6. None of the interaction effects was significant, which indicates that there are no differences between the three countries in the effect of the quality of the parent-child relationship and the country in predicting aggression or depression of early adolescents.

Table 5. *PROCESS Regression Analysis Results of Interaction Effects between Parent-Child Relationship Quality and Safety Level Predicting Aggression*

	B [95% CI]	SE B	*T*	*p*	R^2
Negative interaction father x Country	.007 [-.09, .10]	.047	.14	.89	.23
Support father x Country	.008 [-.02, .38]	.016	.48	.63	.19
Negative interaction mother x Country	.009 [-.03, .05]	.022	.39	.69	.27
Support mother x Country	.005 [.04, .05]	.022	.21	.83	.18

Note. CI = confidence interval

Table 6. *PROCESS Regression Analysis Results of Interaction Effects between Parent-Child Relationship Quality and Safety Level Predicting Depression*

	B [95% CI]	SE B	*T*	*p*	R^2
Negative interaction father x	-.03	.031	-1.05	.29	.15
Country	[-.09, .03]				
Support father	.03	.021	1.62	.10	.13
x Country	[-.01, .08]				
Negative interaction mother x	-.01	.028	-.38	.70	.20
Country	[-.07, .04]				
Support mother	.01	.023	.34	.73	.13
x Country	[-.04, .05]				

Note. CI = confidence interval

Discussion

The aim of the present study was to investigate (a) possible cross-cultural differences in the affective quality of the parent-child relationship and in early adolescent internalizing and externalizing problem behaviour, (b) the presumed link between affective quality of the parent-child relationship, support and negative interaction, and externalizing and internalizing early adolescent problem behaviour, aggression and depression, and (c) possible differences between countries of dissimilar safety levels in the link between the affective quality of the parent-child relationship and early adolescent problem behaviour.

We expected to find cross-cultural differences in the affective parent-child relationship, defined as support and negative interaction, and adolescent internalizing and externalizing problem behaviour, defined as aggression and depression. Our results confirm these hypotheses and show significant differences between the Icelandic, Dutch and Indian adolescents in reported negative interaction and support, and in aggression and depression. The participants from Iceland, which is ranked with the highest safety level, reported significantly higher on support. The participants from India, which is ranked with a low safety level, reported significantly more negative interaction with both parents.

The cultural differences in affective quality of the parent-child relationship found in this study are consistent with earlier cross-cultural studies (Harkness & Super, 2006; Trommsdorff & Kornadt, 2003) and are in line with the ecological theory of Bronfenbrenner (1992) and the developmental niche (Super & Harkness, 1986). The differences could be explained by the different parental ethnotheories, which are influenced by the dominant values of a culture. As discussed before, these values could be influenced by the safety level. Presumably, parents in India experience more stress about safety than parents in a safe and peaceful environment and therefore emphasize monitoring and

being strict more, which could result in more conflictive parent-child interaction during adolescence. Furthermore, because Iceland is ranked as a safe country, it could be assumed that Icelandic parents worry less about safety and are more likely to emphasize trust (Basabe & Valencia, 2007), which could explain that Icelandic adolescents reported significantly more support. However, further research is needed to examine the influence of the safety level on parental ethnotheories.

Furthermore, the Dutch participants reported significantly less depression and aggression than the Icelandic and Indian adolescents. These results confirm the presumption that there are cross-cultural differences in adolescent problem behaviour, as suggested in the ecological theory (Bronfenbrenner, 1992) and the developmental niche (Super & Harkness, 1986). Nonetheless, these findings are not consistent with our expectation to find less adolescent problem behaviour in the country with the highest safety level, Iceland. However, as discussed before, there are more cultural dimensions that might have an influence on adolescent behaviour or interact with the effect of safety, like the degree of individualism or collectivism (Killen & Wainryb, 2000). More cross-cultural research in these countries is needed to explain these differences in adolescent problem behaviour.

Secondly, we expected to find a significant negative link between support of the parent and internalizing and externalizing adolescent problem and a significant positive link between negative parent-child interaction and internalizing and externalizing adolescent problem behaviour. These hypotheses were partially confirmed in our results. We found a significant link between negative interaction of father and mother on adolescent aggression and a significant link between negative interaction with mother on adolescent depression, which is consistent with earlier studies investigating the link between parent-child conflict and adolescent internalizing and externalizing problem behaviour (Muris, Meesters & Van Den Berg, 2003; Raja, McGree & Stanton, 1992). This could be explained *by social interactional theory* (Patterson, Reid & Dishion, 1992), which proposes that children adopt the interaction style of their parents. Parents who interact in a coercive and hostile way therefore train their children to interact with others in a similar antisocial way. Children who are exposed to hostile and unsupportive parenting are thus at increased risk for experiencing problem behaviour during adolescence.

However, we did not find a link between support from father or mother and adolescent aggression or depression. These findings are inconsistent with earlier studies that show a link between parental support and adolescent internalizing and externalizing problem behaviour. An explanation for this could be the age difference. Earlier research focused either on older or younger children. It is presumable that the link between parental warmth and problem behaviour changes during early adolescence. Specifically, early adolescence is a developmental period that is characterized by trying to be more autonomous and to discover individuality, while still maintaining a warm relationship with parents (Erikson, 1986). During adolescence, the parent-child conflict increases in frequency and intensity (Laursen, Coy & Collins, 1998), and therefore continues to be an important predictor of

adolescent problem behaviour. However, the importance of parental support decreases while the importance of peer support increases (Helsen, Vollebergh & Meeus, 2000). The decreasing importance of parental support could be an explanation for the finding that parental support was not linked with adolescent problem behaviour. Further research is needed to confirm this statement and findings.

Finally, we expected to find a moderating effect of country on the link between the affective quality of a parent-child relationship and internalizing and externalizing adolescent problem behaviour. However, our results show no significant interaction effects, which indicates that the link between affective quality of the parent-child relationship and internalizing and externalizing problem behaviour of early adolescents is similar in countries with different safety levels.

The first possible explanation for this could be that the effect of the affective quality of parent-child relationship and internalizing and externalizing problem behaviour is similar across countries of dissimilar safety levels. This is suggested in the *ethnic equivalence* model, which stresses the universality of the effects of parenting and therefore predicts no cultural differences in the link between parenting behaviour and adolescent outcomes (Lamborn & Felbab, 2003).

However, the absence of the presumed interaction could also be due to our way of measuring safety. To indicate the safety, rankings of GPI were used. This is a widely used measurement for the average safety level of a country. Nevertheless, it can be suggested that the effect of the degree of safety in a country varies across different individuals. The presumed influence of the safety level could be mediated by the personal perception of safety. This could especially be the case in India, due to large regional differences. Although India is ranked as having a 'low' safety level, it should be taken in account that this ranking is an average. The Numbeo Crime Index 2018 ranks Pune as number 8 of 17 Indian cities (Numbeo, 2018). The city Gurgaon is ranked as number 1 with a crime index of 64.99, while Pune is ranked with a crime index of 41.78. This suggests relatively big differences between Indian cities in crime and thus safety. It is reasonable to suggest that the adolescents of this study, who all live in Pune, would not be affected by the low safety level as much as expected by the average safety level of India, because they do not experience the low safety as much as in cities with more crime. Furthermore, most adolescents who attend an English medium school in India are from middle and upper class (Aula, 2014). Therefore, the Indian adolescents in this sample will probably experience less of the low safety level as other adolescents in India do. These reasons could explain why the interacting effect of the safety of a country was not found in the results. However, further research is needed to give more insight in the influence of personal perception of safety.

Limitations and strengths

There are some limitations of this study that need to be discussed. The first limitation is that the research was cross-sectional. This could have influenced the results. The parent-child relationship and problem behaviour may change over time. Therefore it would have been interesting to investigate the link between the affective quality of the parent-child relationship and internalizing and

externalizing over a longer period of time. For example, it is suggested that the influence of parenting increases when children are young and decreases while adolescents grow older (Helsen, Vollebergh & Meeus, 2000). As mentioned earlier, the changes in personality and parent-child relationship during early adolescence might influence the investigated link (Erikson, 1968). However, cross-sectional research cannot provide information about causality or direction of effects. It would therefore be interesting to investigate this subject in a longitudinal research to gain additional insights. However, the results are still useful and applicable for this specific age-group; 10 – 12 years old.

Secondly, a limitation of this study is that the Indian adolescents filled out the questionnaires in English. Although they all spoke English fluently, it was not their mother tongue and 75% did not speak English at home. The Dutch and Icelandic adolescents all filled out the questionnaire in their mother tongue. This could have led to lower reliabilities in the Indian sample, as the Cronbach's alpha results showed. However, although the reliabilities of the Indian sample were lower than the reliabilities of the Dutch and Icelandic samples, the Cronbach's alpha results of all samples were still adequate for research purposes. Therefore, the questionnaire filled out in a second language is still reliable and the lower reliabilities of the Indian sample will not significantly have influenced the results.

Finally, the generalizability of the findings is limited because of the sample. The participating Dutch schools can be considered representative considering educational system, class size and religiosity. The participating Icelandic schools were located in different places, differing in educational system and social economic status and can therefore be considered representative. However, the participating Indian schools were all English-medium schools, while most Indian children attend Hindi-medium schools. Nevertheless, the Indian population is very diverse due to differences between classes and regions. It is therefore hard to have a representative sample for the whole society. The findings of this study can be generalized to Indian children who attend in English school, which is approximately 20 percent of the Indian children (Nagarajan, 2015).

Notwithstanding these limitations, this study also has specific strengths that make it an interesting addition to the already existing knowledge about the affective quality of the parent-child relationship and internalizing and externalizing adolescent problem behaviour.

Firstly, this study is one of the first to focus on safety level as a potential explanation for cross-cultural differences in the link between the affective quality of the parent-child relationship and adolescent problem behaviour. It offers opportunities for future research and increases the understanding of environmental factors that might influence child's development, as explained in the ecological theory of Bronfenbrenner (1992).

Secondly, because of the large sample and the use of two different questionnaires, the analyses that are done are reliable and verifiable.

Finally, the participating countries in this study, especially Iceland and India, are quite unique

in studies about parenting and adolescent behaviour. As discussed before, many findings and social sciences theories are based on data of Western countries. With this study, we contributed to investigate differences between cross-cultural, especially between western and non-western countries. This is very important and necessary, because more knowledge about cultural differences could lead to more effective and benefitting prevention and therapy of internalizing and externalizing adolescent problem behaviour while taking the cultural background in account. This study shows that it is important to focus on reducing negative parent-child interaction, to prevent adolescent problem behaviour. Because negative parent-child interaction was positively linked to adolescent problem behaviour in all countries, this implication seems to be applicable for various cultures.

Conclusion

In conclusion, this study contributes to the literature on cross-cultural pedagogy by demonstrating empirical differences between cultures in the affective quality of the parent-child relationship and adolescent problem behaviour. In contrast to other previous studies, this study showed that parental support does not predict aggressive or depressive behaviour of early adolescents. This study confirmed the outcome of various earlier studies that negative interaction with parents is a predictor for adolescent aggression and depression, and pointed out that this link continues to be significant across various countries of a dissimilar safety level. We therefore conclude that although cultural differences in parental support and negative interaction and in adolescent aggression and depression exist, the link between the affective quality of the parent-child relationship and adolescent problem behaviour is not influenced by differences in culture or safety and does not change. Our results suggest that in the prevention of early adolescent aggression and depression, it seems fruitful to focus on improving negative interaction with parents for early adolescents across cultural backgrounds.

References

Achenbach, T. M. (1991). *Manual for the Youth Self-Report and 1991 profile.* Burlington: Department of Psychiatry, University of Vermont.

Ainsworth, M. D., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of attachment.* Hillsdale, NJ: Erlbaum.

Aula, S. (2014, November). The problem with the English language in India. *Forbes.* Retrieved from http://www.forbes.com/sites/realspin/2014/11/06/the-problemwith-the-english-language-in-india/

Barber, J. G., & Delfabbro, P. (2000). Predictors of adolescent adjustment: Parent-peer relationships and parent-child conflict. *Child and Adolescent Social Work Journal, 17*, 275-288. doi:10.1023/A:1007546023135

Barnes, G. M., & Farrell, M. P. (1992). Parental support and control as predictors of adolescent drinking, delinquency, and related problem behaviours. *Journal of Marriage and the Family, 54*, 763-776. doi:10.2307/353159

Basabe, N., & Valencia, J. (2007). Culture of peace: Sociostructural dimensions, cultural values, and emotional climate. *Journal of Social Issues*, *63*, 405-419. doi:10.1111/j.1540-4560

Beam, M. R., Gil-Rivas, V., Greenberger, E., & Chen, C. (2002). Adolescent problem behavior and depressed mood: Risk and protection within and across social contexts. *Journal of Youth and Adolescence, 31*, 343-357. doi:10.1023/A:1015676524482

Bergeron, N., & Schneider, E. (1995). Explaining cross-national differences in peer-directed aggression: A quantitative synthesis. *Environment and Behaviour, 12,* 320-348. Retrieved from: http://journals.sagepub.com/home/eab

Bronfenbrenner, U. (1992). Ecological systems theory. In R. Vasta (Ed.), *Six theories of child development: Revised formulations and current issues* (pp. 187-249). London, England: Jessica Kingsley Publishers.

Buist, K. L., Deković, M., Meeus, W., & van Aken, M. A. (2004). The reciprocal relationship between early adolescent attachment and internalizing and externalizing problem behaviour. *Journal of Adolescence*, *27*, 251-266. doi:10.1016/j.adolescence.2003.11.012

Buist, K. L., Deković, M., & Gerris, J. R. M. (2011). Dyadic family relationships and adolescent internalizing and externalizing problem behavior: Effects of positive and negative affect. *Family Science, 2,* 34-42. doi:10.1080/19424620.2011.601895

Clarke-Stewart, A., & Parke, R. D. (2011). Attachment: Forming close relationships. In Clarke-Stewart, A., & Parke, R. D. (Red.), *Social Development* (p. 102-125). Hoboken: John Wiley & Sons Inc

Coleman, J., & Hendry, L.B. (1999). *The nature of adolescence.* London: Routledge.

Deković, M. (1999). Risk and protective factors in the development of problem behaviour

during adolescence. *Journal of Youth and Adolescence, 28*, 667-685. doi:10.1023/A:1021635516758

Erikson, E. H. (1968). *Identity, youth and crisis*. New York, NY: W.W. Norton.

Fisscher, R., & Hanke, K. (1995). Are societal values linked to global peace and conflict? *Journal of Peace Psychology, 15*, 227-248. doi:10.1080/10781910902993959

Furman, W., & Buhrmester, D. (1985). Children's perceptions of the personal relationships in their social networks. *Developmental Psychology, 21,* 1016-1024. doi:10.1037/0012-1649.21.6.1016

Furman, W., & Buhrmester, D. (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development, 63*, 103-115. doi:10.2307/1130905

Greenfield, P. M., Quiroz, B., & Raeff, C. (2000). Cross-cultural conflict and harmony in the social construction of the child. *New Directions for Child and Adolescent Development*, *2000*, 93-108. doi:10.1002/cd.23220008708

Harkness, S., & Super, M. (2006). Themes and variations: Parental ethnotheories in Western cultures. In K.H. Rubin & O.B. Chung (Eds.), *Parenting beliefs, behaviours, and parent-child relations: A cross-cultural perspective* (pp. 61-79). New York: Psychology Press.

Hayes, A. F. (2012). An analytical primer and computational tool for observed variable moderation, mediation, and conditional process modelling. *Manuscript submitted for publication.*

Helsen, M., Volleberg, W., & Meeus, W. (2000). Social support from parents and friends and emotional problems in adolescence. *Journal of Youth and Adolescence, 29*, 319-335. doi:10.1023/A:1005147708827

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioural and Brain Sciences, 33*, 71-83. doi:10.1017/S0140525X0999152X

Institute for Economics and Peace (2016). *Global Peace Index 2016.* Retrieved on March 22 2017 on http://economicsandpeace.org/wp-content/uploads/2016/06/GPI-2016-Report_2.pdf

Killen, M., & Wainryb, C. (2000). Independence and interdependence in diverse cultural contexts. *New Directions for Child and Adolescent Development, 2000*, 5-21. doi:10.1002/cd.23220008703

Lamborn, S. D., Dornbusch, S. M., & Steinberg, L. (1996). Ethnicity and community context as moderators of the relations between family decision making and adolescent adjustment. Child Development, 67, 283–301. doi:10.1111/j.1467-8624.1996.tb01734

Lamborn, S. D., & Felbab, A. J. (2003). Applying ethnic equivalence and cultural values models to African-American teens' perceptions of parents. *Journal of Adolescence, 26*, 601-618. doi:10.1016/S0140-1971(03)00059-9

Laursen, B., Coy, K. C., & Collins, W. A. (1998). Reconsidering changes in parent-child conflict across adolescence: A meta-analysis. *Child development, 69,* 817-832. doi:10.1111/j.1467-8624

Moffitt, T.E. (1993). Adolescence-limited and life-course persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 100,* 674–701. doi:10.1037/0033295X.100.4.674

Muris, P., Meesters, C., & van den Berg, S. (2003). Internalizing and externalizing problems as correlates of self-reported attachment style and perceived parental rearing in normal adolescents. *Journal of Child and Family Studies*, *12*, 171-183. doi:1062-1024/03/0600-0171/0

Nagarajan, R. (2015, September). Number of children studying in English doubles in 5 years. *The Times of India*. Retrieved from http://timesofindia.indiatimes. com/india/Number-of-children-studying-in-English-doubles-in-5-years/articleshow/49131447.cms

Numbeo (2018). *Current Crime Index by City.* Retrieved on April 3 2018 on https://www.numbeo.com/crime/rankings_current.jsp

Ozer, E. J., & Weinstein, R. S. (2004). Urban adolescents' exposure to community violence: The role of support, school safety and social constraints in a school-based sample of boys and girls. *Journal of Clinical Child and Adolescent Psychology, 33,* 463-476. doi: 10.1207/s15374424jccp3303_4

Patterson, G. R., Reid, J., & Dishion, T. (1992). *Antisocial boys.* Eugene, OR: Castalia.

Pettit, G. S., Laird, R. D., Dodge, K. A., Bates, J. E., & Criss, M. M. (2001). Antecendents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. *Child Development, 72,* 583-598. doi:10.1111/1467-8624.00298

Raja, S. N., McGee, R., & Stanton, W. R. (1992). Perceived attachments to parents and peers and psychological well-being in adolescence. *Journal of Youth and Adolescence*, *21*, 471-485. doi:0047-2891/92/0800-0471506.5

Rice, K. G. (1990). Attachment in adolescence: A narrative and meta-analytic review. *Journal of Youth and Adolescence*, *19*, 511-538. doi:10.1007/BF01537478

Scaramella, L. V., Conger, R. D., & Simons, R. L. (1999). Parental protective influences and gender-specific increases in adolescent internalizing and externalizing problems. *Journal of Research on Adolescence, 9*, 111-141. doi:10.1207/ s15327795jra0902_1

Super, C. M., & Harkness, S. (1986). The developmental niche: A conceptualization at the interface of child and culture. *International Journal of Behavioural Development, 9*, 545-569. Retrieved from http://journals.sagepub.com/home/jbd

Trommsdorff, G., & Kornadt, H-J. (2003). Parent-child relations in cross-cultural perspective. In L. Kuczynski (Ed.), *Handbook of Dynamics in Parent-Child Relations* (pp. 271-306). London: Sage.

Verhulst, F. C., Van der Ende, J., & Koot, H. M. (1997). *Handleiding voor de Youth Self-Report (YSR)* [Manual for the Youth Self-Report (YSR)]. Rotterdam, The Netherlands: Department of Child and Adolescent Psychiatry/Psychology, Erasmus University Medical Center—Sophia Children's Hospital.

Wolff, J.C., & Ollendick, T.H. (2006). The comorbidity of conduct problems and depression in childhood and adolescence. *Clinical Child and Family Psychology Review, 9*, 201–220. doi:10.1007/s10567-006-0011-3