



**The Quality of the Sibling Relationship and Social Competence of Early Adolescents, with  
Parental Support as Moderator**

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### Abstract

**Aim** The aim of the current study was to research whether early adolescents with a harmonious sibling relationship have better social competence than those with a conflictual sibling relationship and whether this difference in social competence is moderated by parental support. **Method** The participants were 230 early adolescents ( $M_{age} = 12.54$ ,  $SD = .67$ ), enrolled in Dutch schools. The cross-sectional data was collected through the online questionnaire on social competence by Valkenburg & Peter (2008), the Sibling Relationship Questionnaire-Short version (SRQ-S) and the Network of Relationships Inventory (NRI). **Results** A T-test for independent samples shows that early adolescents with a harmonious sibling relationship scored significantly higher on social competence than early adolescents with a conflictual sibling relationship. However, regression analysis using PROCESS shows that the association between sibling relationship types and social competence is not significant. Parental support has a significant association with social competence, which means that early adolescents with more parental support scored higher on social competence. Parental support is not a significant moderator for the association between sibling relationship quality and social competence. **Conclusion** The results show that it is important to take into account multiple subsystems in the (nuclear) family in research of social competence of early adolescents. Considering these results, interventions can be developed and used to prevent or minimize deficits in, or to promote social competence. In these interventions, the focus should not be on just one subsystem within the family, but other systems and the family as a whole should be highlighted.

*Keywords:* social competence, sibling relationship quality, parental support, early adolescents

### **The Quality of the Sibling Relationship and Social Competence of Early Adolescents, with Parental Support as Moderator**

In 2021, 18.7% of all girls and 18.4% of all boys in secondary education in the Netherlands showed externalizing problems (Nederlands Jeugdinstituut, 2022). One of the factors that are related to these externalizing problems is low social social competence (Bornstein et al., 2010; Burt et al., 2008). Social competence is the ability to effectively form and manage interpersonal relationships and is of importance in regards to children's and adolescents' success with others in school and in life (Burt et al., 2008; Jones et al., 2015; Rabiner et al., 2016; Valkenburg & Peter, 2008). Therefore, clinical professionals and policy makers highlight the importance of promoting social competence in children and adolescents (Bornstein et al., 2010). In order to be able to promote this, it is necessary to know what factors are associated with social competence, and in what way.

One of the factors associated with social competence in early adolescents is the quality of the sibling relationship (Buist & Vermande, 2014; Feinberg et al., 2012). Adolescents spend more time together with their siblings than with anybody else and the relationship they have is of importance in the development of social and emotional skills (Cicirelli, 1982; Sanders, 2004). The association between the quality of sibling relationships and social competence can be explained through the social learning theory (Bandura, 1971). This theory suggests that people can learn through modeling, which means that they are given examples of behavior and make that behavior their own. For instance, when a sibling models behavior that shows low social competence, the other sibling is likely to show that behavior as well. Another possible theoretical explanation can be found in attachment theory. The relationship between siblings can be seen as an attachment relationship (Ainsworth, 1989; Fraley & Tancredy, 2012). When a person is securely attached to a sibling, it could result in, for instance, a positive self-image and a positive view of the social world (Bowlby, 1973; Bretherton, 1985). A positive view of the world could result in non-delinquent, socially adjusted behavior and social competence. When researching outcomes in the psychosocial domain, defining and distinguishing types of sibling relationships has been found to be important, because the different types are linked to different outcomes (Derkman, 2011; McHale et al., 2007; Sherman et al., 2006). The sibling relationship quality type can be defined by levels of warmth and conflict (Buhrmester & Furman, 1990). Warmth in the sibling relationship means that it contains closeness, intimacy and companionship. Conflict

means that antagonism, arguing and fighting exists in the relationship (Sanders, 2004). When taking both warmth and conflict into account, it is possible to distinguish types of sibling relationships. A sibling relationship that has high levels of warmth and low levels of conflict can be called harmonious, while a sibling relationship that has high levels of conflict and low levels of warmth is conflictual (Buist & Vermande, 2014; Derkman, 2011; McHale et al., 2007; Sherman et al., 2006). Empirical research shows that close, harmonious, sibling pairs show better psychosocial adjustment (Dailey, 2009; McHale et al., 2007). However, this finding comes from research with a relatively small and homogenous sample. Coherent with this finding, in a cross-sectional study with a larger sample it was found that children with a harmonious sibling relationship had a higher level of social competence than children with a conflictual sibling relationship (Buist & Vermande, 2014). The opposite can also be true, as children with a conflictual sibling relationship report lower social competence (Buist & Vermande, 2014). Other research showed a similar result, with higher sibling intimacy, as opposed to sibling conflict, being linked to higher peer social competence (Kim et al., 2007). The current research aims to add to this knowledge regarding social competence in early adolescents with a harmonious versus those with a conflictual sibling relationship.

Another factor associated with social competence is support in the parent-child relationship (Groh et al., 2014). Parental support can be defined as a lasting dependable bond and nurturance between parents and their children (Furman & Buhrmester, 1992). Both sibling and parent-child relationships can play a role in the development of social competence in early adolescents. This can be explained through the ecological systems theory (Bronfenbrenner, 1977). Both the parent-child and the sibling relationship exist in the microsystem of a person, which is the “complex of relations between the developing person and environment in an immediate setting containing that person” (Bronfenbrenner, 1977, p. 514). In this case, the immediate environment is the home, in which the person engages in particular activities in particular roles, such as daughter/son and sibling. The parent and the sibling, in the microsystem, directly influence the development of the child, such as the development of social competence. The link between sibling relationship quality and parental support and their effects on social competence in early adolescents might also be explained through the family systems theory (Cox & Paley, 1997). As suggested by the ecological systems theory, sibling relationships are a part of the microsystem together with other relationships in the family, such as the parent-child

relationship (Bronfenbrenner, 1977). According to the family systems theory, these relationships, such as the sibling and the parent-child relationship, do not function in isolation from each other, but they influence, and are influenced by, each other (Cox & Paley, 1997). Applying this to the current research, the positive effect of a harmonious sibling relationship on social competence can be stronger when more parental support is involved. In addition, the negative effect of a conflictual sibling relationship could be weakened by a lot of parental support. Parental support could, therefore, moderate the association between the quality of the sibling relationship and social competence. The interrelatedness of subsystems within the family has been supported by previous empirical research (Whiteman et al., 2010). For instance, through their parenting, parents can influence factors which in turn are related to the quality of sibling relationships (Whiteman et al., 2011). Therefore, through the association with sibling relationship quality, parenting might be associated with social competence. Previous research has also shown that there is likely a positive association between parenting and social competence (Lengua et al., 2007). However, this article focused on preschoolers, whereas the current research targets early adolescents. In addition, the research did not focus on parental support as a factor, but the broader factor of parenting, which did contain support as a component. Moreover, often research on social competence, in early adolescents or other ages, has focused on the association between one subsystem within the family system, such as the sibling or parent-child relationship. Due to these limitations, it is still unclear whether there are associations between sibling relationship quality, parental support and social competence in early adolescents. The current research aims to add to the knowledge of the associations of the family system with social competence in early adolescents, in order to, for instance, promote social competence through interventions.

Considering the extant literature and its limitations, the following question will be examined: ‘Do early adolescents (11-13 years) with harmonious relationships with their siblings have better social competence than early adolescents with conflictual sibling relationships and is this difference moderated by parent-child support?’ It is hypothesized that early adolescents with a harmonious sibling relationship have better social competence than early adolescents who have a conflictual relationship with their sibling(s). Based on findings on family subsystems and social competence, it is also hypothesized that the difference between the adolescents with harmonious and conflictual relationships on social competence is smaller for early adolescents with a parent-child relationship with more support than those with a parent-child relationship with less support.

The findings of the current research about familial factors that play a part in the development of social competence, can be used in the development and the use of interventions for promoting social competence in early adolescents or preventing or minimizing deficits therein. By doing so, the externalizing problems of students in secondary education, might be reduced.

## Method

### Participants

The participants in the total sample were 327 boys and 396 girls ( $M_{age} = 12.61$ ,  $SD = .67$ ), enrolled in Dutch schools. The early adolescents were recruited via their schools and represented all levels of secondary education in the Netherlands (VMBO to gymnasium). This sample was divided into groups of participants with a harmonious or a conflictual sibling relationship.

The final sample consisted of 86 boys and 144 girls ( $M_{age} = 12.54$ ,  $SD = .67$ ). Of all participants in this sample, 36.5% had at least one brother, while 36.1% had at least one sister. The mean number of siblings per participant with siblings in the subsample was 1.77, with a maximum of 6. Of all siblings about whom a questionnaire was completed, 48.7% were brothers of the participants. The siblings included in the study had a minimum age of 1 year and a maximum age of 26 years ( $M_{age} = 12.68$ ,  $SD = 3.85$ ). Over half of the participants filled out the questionnaire about an older sibling (53.9%). The percentage of early adolescents living with their mother most of the time was 8.6%, while 1.0% lived with their father most of the time. The other participants (82.6%) had parents who were not separated.

### Procedure

The data collection for this cross-sectional study was done at 18 secondary schools spread around the Netherlands. These schools were recruited through the networks of students at Utrecht University. The online questionnaires were filled out by the early adolescents during hours in which students met with their mentor at school. These questionnaires were filled out under supervision of Utrecht University students. Parents received an information letter at home about the study and were given a two-week period to decline participation of their child through an answer slip. The adolescents actively gave their permission for their participation in the study. The questionnaires were filled out anonymously and participants were able to stop their participation at any time, without giving a reason. This study received formal ethical approval by the Faculty Ethical Review Board of the faculty of Social and Behavioral Sciences at Utrecht University.

## Measures

### *Social Competence*

The online questionnaire on social competence by Valkenburg & Peter (2008) was used in order to measure social competence. It includes ten items addressing how difficult or easy it was for the early adolescent to communicate with other people in the past half year. The items used a 5-point scale ranging from 1 (*very difficult*) to 5 (*very easy*). A sample item is, “How difficult or easy was it for you in the past half year to be open about your feelings to somebody?” The scale for social competence is reliable (10 items;  $\alpha = .912$ ).

### *Quality of the sibling relationship*

Participants filled out the Sibling Relationship Questionnaire-Short version (SRQ-S) about the quality of their relationship with one sibling. This questionnaire includes 33 items to be answered on a 5-point scale ranging from 1 (*barely*) to 5 (*an extreme amount*) (Buhrmester & Furman, 1990). The measured subscales are warmth, with 15 items, and conflict, with 6 items. A sample item for the warmth scale is, “To what extent do you admire and respect this sibling?” A sample item for the conflict scale is, “How often are you and your sibling mean towards each other?” The SQR has shown to have a fair to good test-retest reliability (0.58 to 0.86;  $M = 0.71$ ) and a low correlation ( $r = 0.14$ ) with a social desirability measure (Furman & Buhrmester, 1985). More recent research showed that the Dutch version of the SRQ is a valid and reliable instrument for the measurement of sibling warmth and conflict (Derkman et al., 2010). The scale for warmth is reliable (15 items;  $\alpha = .965$ ). In addition, the scale for conflict is also reliable (6 items;  $\alpha = .937$ ). Participants are categorized in harmonious or conflictual sibling relationships, based on their scores of sibling relationship warmth and conflict. The groups are made by using the standard deviation. The group with a harmonious sibling relationship scored +1SD on warmth and -1SD on conflict ( $n = 101$ ). Those with conflictual sibling relationships scored -1SD on warmth and +1SD on conflict ( $n = 129$ ). Less than half of all participants have a harmonious sibling relationship (43,9%,  $n = 101$ ), while 129 participants have a conflictual sibling relationship (56.1%).

### *Parental support*

Parental support was measured using the Network of Relationships Inventory (NRI) with 6 items with answer categories ranging from 1 (*little or not*) to 5 (*could not be more*) (Furman & Buhrmester, 1992). A sample item is, “To what extent does your father/mother teach you to

figure things out by yourself?" The questionnaire was filled out separately for the relationship with the mother and the father. The scale for parental support from fathers is reliable (6 items;  $\alpha = .883$ ), as well the scale for support from mothers (6 items;  $\alpha = .873$ ). The factor and construct validity of this scale are adequate (Edens et al., 1999). The scale for the mother and the father were combined into a parental support scale, which creates a reliable combined scale (12 items;  $\alpha = .912$ ).

### **Plan of analyses**

To answer the first research question, whether children with a harmonious sibling relationship have a higher score on social competence than those with a conflictual sibling relationship, a T-test for independent samples is used. The groups of participants with a harmonious and conflictual sibling relationship are compared in social competence score with the T-test.

To answer the second research question, whether the difference in social competence of early adolescents with a harmonious sibling relationship and with a conflictual sibling relationship is moderated by parental support, regression analysis with the Hayes PROCESS-Macro Model 1 is used. The dependent variable of social competence, the independent variable of sibling relationship quality and the moderator variable of parental support are used in this analysis. For the independent variable, a dummy variable is created. The analysis for both research questions is executed using IBM SPSS Statistics (Version 28).

## **Results**

### **Descriptive statistics**

The results in Table 1 show that the mean score of the participants on social competence is 3.15 ( $SD = .87$ ). In addition, the mean score on parental support is 3.92 ( $SD = .81$ ). Sibling warmth had a mean score of 3.64 ( $SD = 1.01$ ), while conflict had a mean score of 3.26 ( $SD = 1.10$ ).



**Table 1***Descriptive Statistics Sample*

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Social competence	228	3.15	.87	1	5
Parental support	224	3.92	.81	1	5
Warmth in sibling relationship	230	3.64	1.01	1	5
Conflict in sibling relationship	230	3.26	1.10	1	5

**Research question 1: The difference in social competence score for early adolescents with harmonious and conflictual sibling relationships.**

To research whether early adolescents with a harmonious sibling relationship have a higher score on social competence than those with a conflictual sibling relationship, a T-test for independent samples was executed. Before carrying out the analysis, the assumptions were checked. The assumptions of normal distribution and homogeneity of variance were met. The dependent variable is of interval scale. The exception is the assumption of random sampling, which was not met. However, the sample is representative for the population of all levels of secondary education in the Netherlands, therefore the analysis was carried out.

The difference in mean scores for social competence between early adolescents with a harmonious sibling relationship and those with a conflictual sibling relationship was significant ( $t(226) = 4.68; p < .001$ ). Early adolescents with a harmonious sibling relationship, on average, scored significantly higher on social competence ( $M = 3.44; SD = .82$ ) than early adolescents with a conflictual sibling relationship ( $M = 2.93; SD = .83$ ).

**Research question 2: Parental support as a moderator**

To research whether the difference in social competence of early adolescents with a harmonious sibling relationship and with a conflictual sibling relationship is moderated by parental support, a regression analysis was executed with PROCESS. Before executing this analysis, the fitting assumptions were checked. The assumptions of linearity, normal distribution, homoscedasticity, no multicollinearity and no autocorrelation are met. One outlier was found,

which appeared to be part of the population. Therefore the outlier was not deleted. The analysis was also performed without the outlier and this did not significantly change the results.

The results of the regression analysis show that the variables of sibling relationship quality and parental support explain 25% of the variance of social competence ( $R^2 = .25$ ,  $F(3, 220) = 24.97$ ,  $p < .001$ ). Sibling relationship type does not have a significant association with social competence in this model (Table 2). Parental support has a significant association with social competence ( $b = .36$ ,  $t(220) = 4.85$ ,  $p < .001$ ). This means that when early adolescents report more parental support, they have a higher score on social competence. However, the interaction effect of sibling relationship type and parental support is not significant ( $b = .15$ ,  $t(220) = 1.11$ ,  $p = .27$ ). This means that the association between sibling relationship quality and social competence is not moderated by parental support.

**Table 2**

*Complete Regression Analysis with PROCESS for Social Competence*

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>LLCI</i>	<i>ULCI</i>
Constant	-.18	.09	-1.96	.05	-.36	<.001
Sibling relationship type	.23	.16	1.43	.15	-.08	.54
Parental support	.36	.07	4.85	<.001	.21	.50
Interaction sibling relationship x parental support	.15	.13	1.11	.27	-.11	.41

*Note.* Sibling relationship type was dummy coded (0 = harmonious). LLCI = lower limit confidence interval, ULCI = upper limit confidence interval.

### Discussion

The first aim of this study was to research whether early adolescents with a harmonious sibling relationship have better social competence than those with a conflictual relationship. Based on the findings from the existing literature, it was hypothesized that early adolescents with a harmonious sibling relationship quality scored higher on social competence (Bowlby, 1973; Bretherton, 1985; Dailey, 2009; Kim et al., 2007). Consistent with these findings, based on the results from the T-test, a difference in social competence was found. Specifically, early adolescents with a harmonious sibling relationship scored higher on social competence than those with a conflictual sibling relationship. However, no significant difference in social competence is found between sibling relationship types when including parental support as a factor in the regression analysis. The difference in outcomes from the T-test and regression analysis might be explained by the fact that, in the T-test, only sibling relationship quality and social competence are taken into account. When the other interpersonal factor of parental support is added, this factor appears to be important enough to make the association with the quality of the sibling relationship no longer significant. Therefore, the hypothesis that early adolescents with a harmonious sibling relationship have better social competence than early adolescents who have a conflictual relationship with their sibling was not confirmed by the results of the regression analysis.

The second aim of the study was to research whether the difference in social competence between early adolescents with different sibling relationship qualities is moderated by parental support. According to, for instance, the family systems theory, both the parent and sibling relationship function together in the family system and they might strengthen, or compensate for, each other (Cox & Paley, 1997). In addition, findings from existing literature assign an important role to parenting in general in social competence and sibling relationship quality (Lengua et al., 2007; Whiteman et al., 2011). Therefore, it was hypothesized that the difference between young adolescents with a harmonious and a conflictual relationship on social competence is smaller for early adolescents with more parental support than those with less parental support. Based on the results, however, it cannot be confirmed that parental support moderates the association between sibling relationship quality and social competence.

Nonetheless, the results show a main effect between parental support and social competence, and therefore show the importance of parental support. The fact that there are

different outcomes when considering another interpersonal factor compared to when this factor is not considered, indicates the importance of including the (nuclear) family as a whole system when researching outcomes in early adolescents, social competence in the case of this study. This importance might be explained by the family systems theory, which states that the relationships within the (nuclear) family do not just function separately, but they influence each other and are influenced by each other (Cox & Paley, 1997). Subsystems, such as the sibling and the parent-child systems, influence each other. Therefore, in future research, when researching sibling relationship quality and its association with outcomes such as social competence, parental support could be included.

Attached to the current study are several limitations, based on which suggestions for future research can be given. The first limitation involves the questionnaires that rely on self-report from the early adolescents. Self-report may indicate an accurate internal experience when it comes to experiencing sibling relationship quality or social competence. However, self-report could lead to, for instance, social desirability when filling out the questionnaire. In addition, it highlights only one perspective on the variables that are being studied. To show more perspectives on the social competence of the adolescent, in future research, multiple informants could be included. For instance, in addition to self-report from adolescents, teachers could report on social competence. The teacher, a professional, sees the early adolescent in another context and might give a more well-rounded view of the social competence of the adolescent. In addition, the sibling relationship quality could be reported on by the sibling as well as the adolescent. Different informants show different perspectives, which might improve the validity of the research. The second limitation involves the cross-sectional nature of the study. Due to this design, no causal conclusions can be made. Future research could be longitudinal, in order to look into the causality regarding sibling relationship quality social competence in (young) adolescents. The final limitation that will be discussed, is connected to the dividing into groups of participants with a harmonious and conflictual sibling relationship. By doing so, participants who do not fit these categories, are left out of the current study. The sample size was reduced from 794 to 230. This smaller sample size potentially affects the generalizability of the results.

However, dividing the participants into groups of harmonious or conflictual sibling relationships can also be seen as a strength of the current study. The participants are divided into harmonious and conflictual sibling relationship type in order to highlight a difference in an

outcome between these groups. This complements previous research which has shown that the different sibling relationship types show different outcomes on psychosocial adjustment (Derkman, 2011; McHale et al, 2007; Sherman et al., 2006). A second strength of the current study is that the sample included students of all levels of education in Dutch secondary schools, which adds to the representativeness of the sample. A third strength is that, contrary to a large amount of existing research, this study considered not just one subsystem within the family, but both the sibling and the parent-child relationship. The results show the importance of this, because when both subsystems are combined in analysis, one factor regarding the parent-child relationship appears to be so important that it makes the association of the other factor, regarding the sibling relationship, with social competence, not significant. A final strength of the study is that not just one parent, but both the mother and the father are involved when it comes to parental support, even if it is through the perspective of the adolescents. Support from both parents is combined into one scale, which proves to be even more reliable than the separate scales for mother and father.

In conclusion, this study expands the research of the associations between familial factors and social competence of early adolescents and helps to form a more complete view of the associations between these factors. The results show that it is important to take into account multiple subsystems in the (nuclear) family in research of social competence of early adolescents. Considering these results, when developing interventions, the focus should not be on just one subsystem within the family, but other systems and the family as a whole should be highlighted. These interventions can be used to prevent or minimize deficits in, or to promote social competence in early adolescents.

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