

## Sibling relationships during adolescence

Alfredo Oliva

*University of Seville, Seville, Spain*

Enrique Arranz

*University of the Basque Country, Donosti, Spain*

The principal objective of this study was to analyse sibling relationships during adolescence, within the context of parent and peer relationships, and their link with socioemotional adjustment. To this end, 513 adolescents aged between 13 and 19 completed instruments relating to parent–child relationships, sibling adjustment, relationships with peers, self-esteem and life satisfaction. We found important gender-based differences in the meaning and importance that sibling adjustment seems to have for adolescents. For girls, a good relationship with their siblings was linked to good relationships with their parents and peers, as well as increased self-esteem and life satisfaction. For boys, sibling relationships had no relation with other family or personal variables.

### INTRODUCTION

The psychological changes that occur during adolescence are accompanied by changes in adolescents' family relationships. In general, these changes result in a decrease in relations with family members and an increase in relations with subjects' peer groups (Degirmencioglu, Urber, Tolson, & Richard, 1998; Savin-Williams & Berndt, 1990). Even though most of the studies on family relationships focus on parent–adolescent relationships, the few that analyse sibling relationships find that changes in such relationships are characterized by increased conflicts during early adolescence (Brody, Stoneman, & McCoy, 1994; Cole, 1996). As subjects progress through adolescence, previously high conflict levels decrease and intimacy in sibling relationships increases slightly or stays stable between early and late

---

Correspondence should be addressed to Alfredo Oliva, Departamento de Psicología Evolutiva y de la Educación, Facultad de Psicología, Universidad de Sevilla. C/Camilo José Cela, s/n, Sevilla, E-41018, Spain. Email: oliva@us.es

This research was supported by grant BSO2022–03022 to the authors from the Spanish Ministry of Education, Culture and Sports.

adolescence (Burhmester, 1992; Updegraff, McHale, & Crouter, 2002). Nevertheless, sibling relationships during adolescence are never exclusively conflictive, containing elements of inter-sibling help and social support also (Lempers & Clark-Lempers, 1992; Steinberg & Morris, 2001). While during childhood children perceive their siblings as playmates (Yenes, Olabarrieta, Arranz, & Artamendi, 2000), during adolescence, this “function” becomes that of providing the support and intimacy required during this moment of complex socioemotional and cognitive change.

Some variables linked to the family environment, such as birth order or siblings’ gender, seem to be related to the quality of the relationship between siblings and the changes that these undergo during adolescence. Younger siblings seem to benefit more than firstborn children from the guidance and support offered by older siblings and tend to maintain a higher level of intimacy with them (Buhrmester, 1992; Tucker, Barber, & Eccles, 1997). Sibling gender constellation also influences sibling relationships, and same-sex sibling pairs report higher levels of intimacy and less hostility than opposite-sex dyads (Buhrmester & Furman, 1990; Conger, Conger, & Brennon, 2004).

Theoretical models, such as systemic or ecological models (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 1998), are useful for analysing the influence of family relationships on development. Within the family system, we can identify both intra-subsystemic interactions (those that occur within the parental or sibling subsystem) and inter-subsystemic interactions (those that occur between the two subsystems, from parents to children and from children to parents). For further details regarding this line of research, see the works of Borkowsky, Ramey, and Bristol Power (2002), Broderick (1993) and Hinde & Hinde (1979).

### **Relationships with parents and relationships with sibling (inter-subsystem and intra-subsystem interactions)**

The influence of the quality of parent–adolescent interactions on interactions between adolescent siblings is supported by some studies (Brody et al., 1994; Bussell et al., 1999). Cohesion and harmony in parent–adolescent interactions appear to be linked to more positive sibling relationships (Jodi, Bridges, Kim, Mitchell, & Chan, 1999). Conversely, a perception of parental rejection is linked to more aggressive behaviour towards both siblings and peers (MacKinnon-Lewis, Starnes, Volling, & Johnson, 1997), while the unfair treatment of their children by parents is associated with the development of less intense inter-sibling ties (Sutton, 1996) and a higher rate of inter-sibling conflict (Brody, Stoneman, & Burke, 1987). Another series of studies found that conflictive inter-parental

relationships have a negative effect on sibling interaction (Golombock, 2000; Grych & Fincham, 1990; Noller, Feeney, Sheehan, & Peterson, 2000; Reese-Weber, 2000).

On the basis of these data, we can conclude that the quality of interaction between and within the two family subsystems is closely linked. From this perspective, it seems unlikely that conflictive parent–adolescent interactions can coexist with harmonious sibling interactions (or vice versa) within the same family system. The dynamic balance of the family subsystem (balance not always being understood as positive and normal, but negative and pathological also) seems to be best obtained through the search for consistency, rather than through compensatory processes.

### **Sibling and peer relationships (inter-systemic interactions)**

The idea of the link between the quality of diverse interactions also arises during the analysis of interactions in two different systems: sibling interactions and peer interactions. From the perspective of attachment theory (Bowlby, 1980), it is reasonable to assume that representational models built on the basis of children's relationship with their parents will have a significant influence on other relationships, such as sibling or peer relationships. In this way, the establishment of secure ties with parents indicates a higher probability of establishing secure or positive relationships with siblings and peers. From the social learning theory point of view, congruence between relationships could be explained because social skills that children and adolescents learn in one relationship are generalized to experiences in other relationships. These approaches point clearly to the consistency or continuity of inter-systemic relationships. On the other hand, the theory suggested by Dunn (1992) of a possible compensation, during childhood, for negative sibling interactions by positive peer interactions, or vice versa, is confirmed by data currently available regarding sibling and peer interactions during adolescence. A study by East and Rook (1992) found that adolescents isolated from peers perceived their sibling relationships in a more positive way. Anyway, there is more empirical support for congruence theory (Kramer & Gottman, 1992; Reese-Weber & Bartle-Haring, 1998; Seginer, 1998; Updegraff, McHale, & Crouter, 2000, 2002). Finally, some studies find no linkages between sibling and peer relationships (Abramovitch et al., 1986; Dunn, 1992).

### **Sibling relationships and adolescent adjustment**

Adolescent adjustment is influenced by the nature of the child–parent relationship, especially as regards the degree of warmth and closeness (Gray

& Steinberg, 1999; Lamborn, Mounts, & Steinberg, 1996; Steinberg, 2001; Steinberg, Mounts, Lamborn, & Dornbusch, 1991), and parental monitoring (Barber, Olsen, & Shagle, 1994; Jacobson & Crockett, 2000; Stattin & Kerr, 2000). Nevertheless, research data also show how adjustment is linked to the quality of sibling relationships during adolescence. Some studies found that positive sibling interactions were associated with good levels of personal adjustment, and that the influence of siblings may be even greater than that exerted by parents (Seginer, 1998; Yeh, 2001). Also, conflictive and violent sibling relationships are linked to antisocial behaviour and personal adjustment problems during adolescence (Berman, 1994; Conger, Conger, & Scaramella, 1997; Schaeffer & Borduin, 1999). Some studies have found the existence of gender differences, noting that personal adjustment is more dependent on sibling relationships for women than for men (Bank, Patterson, & Reid, 1996; Davis, 2000; Sutton, 1996). These findings may be interpreted in accordance with the hypothesis that women tend to make a greater emotional investment in family relationships, and therefore build an identity that is more dependent on the quality of those relationships. This idea, however, must be studied in greater depth before any firm conclusions can be drawn.

### Research questions

In accordance with the above review, it can be concluded that sibling interactions form an important part of the complex network of intra-systemic family relationships, and that they influence and are influenced by other intra-family interactions, such as parent-child and parent-parent interactions. Findings generally support a consistency rather than a compensatory balance between the diverse intra-family interactions. Similarly, it can also be concluded that sibling interactions are related to adolescents' interactions with their peers (also along the lines of the consistency hypothesis rather than the compensatory one). Finally, the influence of sibling interactions on diverse psychological variables, such as personal adjustment, self-esteem, antisocial behaviour, depression-related problems and other behavioural problems should be emphasized. Empirical data suggest that sibling interactions have a stronger association with psychological adjustment in women than in men.

In accordance with the data given above, this study was designed with the following objectives:

- 1 To explore perceptions of sibling relationships during adolescence, paying special attention to those variables that may influence this perception, such as age, gender, birth order and the age or gender of siblings. The authors expected to find a more negative perception of

fraternal relationships among firstborn children. As regards age, the fact that some studies, which were carried out in Anglo-Saxon countries (Burhmester, 1992; Updegraff et al., 2002), found that sibling relationships did not deteriorate during the period between early and late adolescence led the research team to predict that in Spanish society, in which family relationships are afforded great importance, sibling relationships would be as positive between young adolescents as between older ones. No clear hypothesis was formed regarding the influence of gender on the perception of sibling relationships.

- 2 To prove that there is an association between adjustment to siblings and relationships with parents and peers, analysing whether intra-systemic and inter-systemic relationships coincide with the consistency or compensatory theories. The greater abundance of empirical evidence in favour of the consistency theory led the authors to predict a positive correlation between sibling, parent and peer relationships. Furthermore, possible gender differences in these relationships were also predicted, with a greater consistency between girls.
- 3 Finally, the study aimed to analyse the role that sibling relationships play in adjustment during adolescence. The authors predicted that a good relationship with parents and siblings would have an accumulative or additive effect on psychological adjustment (self-esteem and life satisfaction). Furthermore, as stated in the previous hypothesis, adjustment to siblings was expected to have a positive association with social adjustment variables (intimacy with the best friend and adjustment to peers).

## METHOD

### Participants

The sample consisted of a total of 513 Caucasian adolescents (221 boys and 292 girls) aged between 13 and 19 ( $M = 15.43$ , and  $SD = 1.19$ ), all attending private or state schools in the Spanish province of Seville. Subjects were selected from a total of ten secondary schools (six in the capital, three in rural areas and one in the metropolitan area) chosen on the basis of population size and type of school (four private and six state institutions). Within each school, an entire class was selected from each educational level. In schools with two or more classes per level, one class was selected at random. Only two boys and one girl declined to participate in the study. Of these 513 adolescents, 49 were only children, 202 had one sibling, 163 had

three siblings, 68 had four siblings and the remaining 31 had five or more siblings. The sample could be considered representative of all adolescents attending secondary school in the Spanish province of Seville.

## Measures

For the purposes of the study, a questionnaire was compiled that included a number of different instruments related to family relations, peer relations and various aspects of personal development. Some of these instruments were developed ad hoc for this study, while others were adaptations or translations from the works of other researchers.

*Parental style.* This was assessed using an instrument created by Steinberg and his colleagues (Lamborn, Mounts, Steinberg, & Dornbush, 1991; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994), which consisted of 24 items that explored the adolescent's perception of the educational or disciplinary style used by his/her parents, classified according to two dimensions: acceptance/involvement (Cronbach's  $\alpha = .71$ ) and supervision ( $\alpha = .70$ ). The acceptance/involvement scale assesses the degree to which adolescents view their parents as being responsive and loving, and includes 15 items (e.g., "When my mother wants me to do something, she explains why"). The supervision scale measures adolescents' perceptions of parental monitoring and behavioural supervision (e.g., "My parents know exactly where I am most afternoons after school").

*Adjustment to siblings.* This variable was measured using the questionnaire on sibling relationships (QSR; Arranz, Olabarrieta, Yenes, & Martín, 2001; Freijo, Arranz, Malla, & Olabarrieta, 1993; Yenes et al., 2000), which consists of three open questions:

- 1 What does having a brother/sister mean to you?
- 2 Are you happy with your place among your brothers and sisters? (Say yes or no and explain why.)
- 3 Would you like to change your place among your brothers and sisters? (Say yes or no and explain why.)

Subjects' answers were classified as positive, positive/diffuse, negative or negative/diffuse. Once the responses were classified, a sibling adjustment rating was established on the basis of each subject's positive or negative perception of his/her sibling relationships. The following criteria were followed during the establishment of this rating:

A positive answer to question 1 that was neither diffuse nor invalid was awarded 2 points; responses classified as positive/diffuse were

awarded 1 point and negative answers 0 points. The same criterion was also used for question 2. Finally, negative answers to question 3 that were neither diffuse nor invalid were awarded 2 points, negative/diffuse responses 1 point and positive answers 0 points. Diffuse answers are those that transmit a positive impression in the case of questions 1 and 2 and a negative impression in the case of question 3, but which do not offer a specific reason to explain this impression, for example: "it's nice". For this reason they were awarded 1 point on the sibling adjustment rating. Two points were awarded to answers that gave a reason explaining the positive (questions 1 and 2) or negative (question 3) impression. Examples of answer categories considered positive were: "receipt of friendship, companionship, trust and intimacy"; "receipt of help and defence" or "to have fun". Negative answer categories were, for example: "to have to share" or "non-aggressive conflicts". Invalid answers were not assessed because they showed no connection with the question asked.

Subjects' answers were classified by expert judges not directly involved in the study. A *kappa* inter-rater reliability test (Cohen, 1960) was carried out with the category systems used to classify adolescents' responses to the QSR. The test showed the following results: Question 1:  $N = 120$ , *kappa* .809,  $p < .01$ . Question 2:  $N = 120$ , *kappa* .745,  $p < .01$ . Question 3:  $N = 120$ , *kappa* .558,  $p < .01$  (Yenes et al., 2000).

The sibling adjustment rating (SAR) ranged between 0 and 6 ( $M = 3.61$  and  $SD = 1.86$ ). Adolescents with a high SAR had a positive perception of their sibling relationships and were well-adapted to the place that they occupied among their brothers and sisters. For further information regarding the psychometric characteristics of this instrument see Yenes et al. (2000).

*Intimacy with best friend.* This variable was measured using a translation of the intimate friendship scale (IFS; Sharabany, 1994), a scale consisting of 32 items that explore the characteristics of subjects' relationships with their best friend. Participants rated items like "I feel close to him/her" and "I feel free to talk with him/her about almost anything" on a 7-point scale. The scale showed a high internal consistency ( $\alpha = .90$ ).

*Peer attachment.* Participants completed a Spanish version of the inventory of peer attachment (IPA) developed by Armsden and Greenberg (1987). The scale was developed to assess both the affective and cognitive dimensions of attachment security and trust in the accessibility and responsiveness of friends. It consisted of 24 items such as: "My friends respect my feelings". Items are rated in a scale from 1 = "never" to 5 = "always". The scale had a reliability rating of  $\alpha = .70$ , and while the

IFS focuses on the characteristics of one specific relationship, the IPA analyses a subject's peer relationships from a global perspective.

*Self-esteem.* This was assessed by using the Rosenberg self-esteem scale (RSES; Rosenberg, 1965), which consisted of 10 items ( $\alpha = .80$ ) that were rated on a 4-points scale (from 1 = "strongly disagree" to 4 = "strongly agree"). Sample items include: "I feel that I am worth as much as other people".

*Life satisfaction.* This variable was measured using a 5-item scale developed by the authors with an internal reliability of  $\alpha = .80$ . Adolescents rated items such as: "I am very happy with my life" on a 5-point scale from 1 = "strongly disagree" to 5 = "strongly agree".

## Procedure

The objectives of the study were explained to the headmasters/head-mistresses of the selected schools during initial written and telephone contacts, after which an interviewer visited the school and selected the necessary classes. Parents were informed by mail about the study. Only three parents prevented the participation of their children in the study. The subjects from each selected class completed the anonymous questionnaire during two 45-minute group sessions, which took place on two different days.

## RESULTS

The majority of subjects studied had at least one sibling, only 49 (9.6%) were only children. Although comparisons must be interpreted with caution due to the low number of subjects with no siblings, results of ANOVAs carried out indicated that only children did not differ significantly from subjects with siblings as regards their perceptions of family relationships and psychosocial adjustment ratings.

### Perception of sibling relationships

With regard to the assessment of sibling relationships by the QSR, 69.8% of the subjects gave a positive assessment; 63.2% stated that they felt happy with their place among their siblings and 60% denied wanting to change their place. In response to the question "What does having a brother/sister mean to you?" 41.5% of the subjects gave answers that were classed in the positive category (*receipt of friendship, companionship, trust and intimacy*);

and 10.7% gave answers classed in the positive category (*receipt of help and defence*). Negative responses were much less frequent (*to have to share*, 2.5%, and *habitual criticism*, 2.3%).

As mentioned in the instruments section, a sibling adjustment rating was established in order to assess the quality of sibling relationships ( $M = 3.61$ ,  $SD = 1.86$ ). While this adjustment was not related to birth order,  $r(489) = .00$ , *ns.*, age,  $r(489) = .05$ , *ns.*, difference in age between siblings,  $r(489) = .05$ , *ns.*, or gender,  $F = 1.49$  (1, 488), *ns.*, of the adolescent him or herself, it was linked to the gender of the sibling(s), although only in the case of girls. When the sibling adjustment of girls with at least one sister was compared to that of girls with only brothers, significant differences were observed, with the level of adjustment being higher among the former group,  $F = 4.54$  (1, 276),  $p < .05$ ; *Cohen's d* = .46. The percentage of cases in which none of the siblings were the same sex as the subject was 38% for girls and 37% for boys.

### Relationships with sibling, parents and peers

As regards the link between sibling adjustment and relationships with parents and peers, Table 1 shows how in boys sibling relationships had no significant correlations with any of the variables considered, while in girls the situation was completely different. Girls with a better level of sibling adjustment perceived a greater degree of parental acceptance as well as greater peer attachment and intimacy with the best friend. Correlation with parental supervision was not significant. We can therefore affirm, with a certain degree of precaution given that the correlations are low, that these data support the consistency theory and, as predicted, this consistency among relationships varies in accordance with the subject's gender.

### Sibling relationships and adolescent adjustment

As is shown in Table 1, sibling adjustment had significant correlations with all psychological and social adjustment measurements, although this was only true in the case of female subjects. Nevertheless, if the correlations between these adjustment levels and parental style variables are analysed, it is clear that they are significant, especially with regard to perceived acceptance or affection. Therefore, bearing in mind that sibling adjustment was associated with parental style, it may be that it is in fact parental style that influences both sibling adjustment and socio-personal adjustment. It is therefore necessary to control acceptance and supervision variables when analysing the relationship between sibling adjustment and personal and

TABLE 1  
Correlations among all the measured variables for boys and girls

	1	2	3	4	5	6	7
<i>Boys</i>							
1. Sibling adjustment							
2. Parental acceptance	.09						
3. Parental supervision	.01	.21**					
4. Intimacy	.13	.19**	-.04				
5. Peer attachment	.12	.12	.04	.35***			
6. Self-esteem	.10	.13	.05	.10	.32***		
7. Life satisfaction	.07	.22**	.02	.23**	.42***	.50***	
<i>Girls</i>							
1. Sibling adjustment							
2. Parental acceptance	.16**						
3. Parental supervision	.01	.24**					
4. Intimacy	.14*	.11	.12*				
5. Peer attachment	.16**	.15*	.20**	.39***			
6. Self-esteem	.16**	.21***	.08	.15*	.33***		
7. Life satisfaction	.17**	.27***	.14**	.09	.30***	.46***	

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

social assessments. Even when moderate, partial correlations continue to be significant for self-esteem,  $r = .15$ ,  $p < .05$ , life satisfaction,  $r = .16$ ,  $p < .05$ , intimacy,  $r = .17$ ,  $p < .01$ , and peer attachment,  $r = .19$ ,  $p < .01$ . This was true only for female subjects, and showed that once the quality of the parent-child relationship was taken into account, good sibling adjustment was related to good psychosocial adjustment in girls.

In order to analyse these associations more deeply, the authors decided to carry out a hierarchical regression in which the following were considered as predictor variables: age, parental acceptance, parental supervision and sibling adjustment. The inclusion of age in the first step enabled the authors to monitor the effects of this variable on the relationship between family variables and adjustment in girls. In order to detect the possible existence of effects of interaction between parent and sibling relationships, such as, for example, whether a good level of sibling adjustment has better consequences for adolescents who perceive less parental acceptance, the authors followed the procedure proposed by Aiken and West (1991). After standardizing the predictive variables, two new predictors were created by multiplying parental acceptance and supervision by sibling adjustment. These variables were divided into four blocks: age, those relating to parental style (acceptance and supervision), sibling adjustment and the interactions between acceptance and adjustment, and supervision and adjustment. The

dependent variables considered were: self-esteem, life satisfaction, intimacy and peer attachment.

Given that no relationship was found between sibling adjustment and the variables relating to personal and social adjustment in boys, regression analyses were carried out with regard to female subjects only. Tables 2 and 3 show the results of these analyses. Both parental acceptance and sibling adjustment had significant relationships with self-esteem and life satisfaction (Table 2). Supervision as a factor of parental style did not seem to have any influence whatsoever, and there were no significant interaction effects observed, which leads to the conclusion that good sibling relationships have a positive influence on the psychological adjustment of adolescents that perceive a high level of parental acceptance and supervision, as well as adolescents whose family context is characterized by a significant lack of such acceptance and supervision.

TABLE 2  
Variables predicting self-esteem and life satisfaction for girls

<i>Predictors</i>	<i>Self-esteem</i>			<i>Life satisfaction</i>		
	<i>Beta</i>	<i>R<sup>2</sup></i>	<i>Change R<sup>2</sup></i>	<i>Beta</i>	<i>R<sup>2</sup></i>	<i>Change R<sup>2</sup></i>
1. Age	.09	.01	.01	-.08	.01	.01
2. Parents' acceptance	.21***	.06	.05	.25***	.08	.07
Parents' supervision	.05			.07		
3. Sibling adjustment	.14*	.8	.2	.14*	.11	.03
4. Acceptance × sibling adjustment	-.04		.00	-.06		
Supervision × sibling adjustment	.05	.08	.00	.06	.11	.00

\*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$ ;  $N = 276$ .

TABLE 3  
Variables predicting intimacy with best friend and peer attachment for girls

<i>Predictors</i>	<i>Intimacy</i>			<i>Peer attachment</i>		
	<i>Beta</i>	<i>R<sup>2</sup></i>	<i>Change R<sup>2</sup></i>	<i>Beta</i>	<i>R<sup>2</sup></i>	<i>Change R<sup>2</sup></i>
1. Age	.15*	.02	.02	.06	.00	.00
2. Parents' acceptance	.09	.05	.03	.11	.06	.06
Parents' supervision	.13*			.19**		
3. Sibling adjustment	.14*	.08	.05	.16**	.08	.02
4. Acceptance × sibling adjustment	-.12			-.06		
Supervision × sibling adjustment	-.10	.09	.01	-.05	.08	.00

\*\* $p < .01$ ; \* $p < .05$ ;  $N = 269$ .

In the case of regression on the variables related to peer relations, the results were somewhat different (Table 3). In this case, parental supervision, rather than acceptance, was the most decisive variable, with girls who perceived a greater degree of parental supervision demonstrating a greater level of intimacy and peer attachment. Sibling adjustment continued to have a significant influence, after the effect of parental and demographic variables were analysed, making a significant contribution to better peer relations. Interaction effects between parental acceptance or supervision and sibling adjustment were not observed.

Finally, to return to the analyses discussed at the beginning of this section, it was stated earlier that no significant differences were found in either family or socio-personal adjustment variables between adolescents with siblings and only children. Nevertheless, a good or bad perception of sibling relationships showed a significant link with self-esteem, life satisfaction, peer attachment and intimacy with the best friend. Consequently, the sample was split into three subgroups: adolescents with a score over the mean in the sibling adjustment rating (SAR), adolescents with scores below the mean and adolescents without siblings. ANOVAs were then conducted to compare these subgroups. The mean scores obtained by the small group of only children in these variables were halfway between those obtained by adolescents with a good level of sibling adjustment (who also demonstrated better social and personal adjustment) and those obtained by subjects who showed less enthusiasm for their sibling relationships (who also demonstrated a lower adjustment level), except in relation to the intimacy variable, in which only children obtained slightly lower scores. Post hoc analyses using Tukey procedure showed that differences were significant only between groups of good and poor sibling adjustment for self-esteem ( $p < .05$ ; *Cohen's d* = .29), life satisfaction ( $p < .05$ ; *Cohen's d* = .28) and peer attachment ( $p < .05$ ; *Cohen's d* = .36). In light of these results, it seems that having siblings favours social and personal adjustment during adolescence, but only in cases of good adjustment to this situation.

## DISCUSSION

The analysis of sibling relationships within the context of parent and peer relationships led to a systemic approach that contributed to further our understanding of the role played by sibling relationships for Spanish adolescents. Subjects' responses to the sibling questionnaire indicated that such relationships are significant and positive for the majority of adolescents. The results of the study clearly show a favourable perception of siblings throughout adolescence that is not related to the subject's age or birth order. Nor does the subject's gender influence this perception,

although the gender of the sibling(s) does, since girls have a less positive perception of what it means to have brothers/sisters when all their siblings are of the opposite sex. This circumstance does not apply to boys, since boys who have only sisters do not have a less positive perception of sibling relationships than those with at least one brother. Girls probably have a greater level of interpersonal sensitivity and are capable of offering greater support to their brothers, thereby somehow compensating for the difference in sex.

We should also highlight the gender-based differences observed in the meaning and importance that sibling adjustment seems to have for adolescents. For girls, sibling relationships are clearly consistent with parent and peer relationships, and have a low but significant correlation with self-esteem and life satisfaction. For boys, however, the situation is very different, since while they enjoy a similar quality of sibling relationship to girls, a greater or lesser degree of sibling adjustment is not related to other family or personal variables. These data confirm the findings of other authors (Bank et al., 1996; Sutton, 1996) regarding the importance of sibling relationships for personal adjustment in female subjects, and also coincide with the large body of research that suggests a greater sensitivity in women to interpersonal relationships, especially within the family environment (Colarossi & Eccles, 2000; Geuzaine, Debry, & Liesens, 2000). According to the model of female development compiled by Gilligan (1982), the emotional link, especially with family members, is a key element in healthy development throughout the life cycle. In accordance with the sex role socialization theory, boys focus on domination and exploration of their world while girls focus on interpersonal relationships (Harter, 1990), which is why it not surprising that while girls' self-esteem and life satisfaction are clearly linked with interpersonal relationships, for boys, other sources such as academic or sporting performance tend to be more important (Colarossi & Eccles, 2000; Slavin & Rainer, 1990).

In reference to the relationships between the different family subsystems, we may say that the hypothesis of consistency between child–parent and child–sibling relationships is only fulfilled in cases of female subjects and through significant but low correlations. The same occurs with regard to the consistency between the family system and peer relations, which was again only observed in girls. Our results indicated that when female subjects' relationships with their parents are characterized by acceptance and support, their relationships with their siblings and peers are marked by positive affection. These results coincide with attachment theory, since girls that construct a secure internal working model in their relationship with their parents develop a basic attitude of trust in others, which leads them to establish equally secure relationships with their siblings and peers (Bowlby, 1980; Sroufe & Fleeson, 1986). On the other hand, in the case of male

subjects, the results show that relationships with parents, siblings and peers are relatively independent, being contexts or systems with very little interrelation. It is clear that our data do not support the compensation hypothesis, which proposes a negative correlation between parental relationships and peer relationships, on the basis that adolescents with weaker emotional ties to their parents will develop closer ties with their siblings or peers (Blos, 1967; Steinberg & Silverberg, 1986).

In the search for effects of interaction between parental support or supervision and sibling adjustment in order to predict personal adjustment levels or peer relationships, results reveal an additive or accumulative model, in which both parents and siblings had positive, independent effects. Girls with greater parental acceptance and better sibling adjustment demonstrated higher levels of self-esteem and life satisfaction. In the case of relationships with peers, parental supervision replaced parental acceptance as the family variable most closely related to intimacy with the best friend and attachment to peers. The fact that parental acceptance is related to internal or emotion adjustment variables, while supervision is related to social variables, coincides with the findings of the majority of research projects focusing on the effects of parental style dimensions (Steinberg, 2001; Steinberg & Silk, 2002).

The results of the study showed that having siblings is related to adolescents' social and personal adjustment, although only among girls and only in cases of good sibling relationships. In cases of poor sibling adjustment, it is probable that the negative effects of everyday situations of rivalry and conflict outweigh the benefits of any support that may be provided. Nevertheless, it must be remembered that one limitation of this study is that all the data obtained came from the same source, i.e., the subjects themselves. It is possible that subjects' moods or emotions may have influenced their responses to the questionnaires, reflecting relationships between their perception of their relations with their parents, siblings and peers and their own emotional states. However, it is not unreasonable to assume that this would occur among both boys and girls, in which case the fact that no relationship was found between boys' perception of their adjustment to their siblings and the other variables considered, casts doubt on this hypothesis. In any case, new studies, which include other information sources, such as subjects' parents or siblings, need to be carried out in order to gain a more complete picture of the role played by sibling relationships in adolescent development. Another of this study's limitations is linked to the correlational nature of the associations found between the variables studied, which did not permit the researchers to establish causal relationships.

*Manuscript received 28 September 2004*

*Manuscript accepted 28 January 2005*

## REFERENCES

- Abramovitch, R., Corter, C., Pepler, D. J., & Stanhope, L. (1986). Sibling and peer interaction: A final follow-up and a comparison. *Child Development, 57*, 217–229.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park: Sage.
- Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence, 16*, 27–454.
- Arranz, E., Olabarrieta, F., Yenes, F., & Martín, J. (2001). Perceptions of sibling relationships in children aged 8 to 11. *Revista De Psicología General y Aplicada, 54*, 425–441.
- Bank, L., Patterson, G., & Reid, J. (1996). Negative sibling interaction patterns as predictors of later adjustment problems in adolescent and young males. In G. H. Brody (Ed.), *Sibling relationships: Their causes and consequences*. Norwood: Ablex Publishing Corporation.
- Barber, B., Olsen, J., & Shagle, S. (1994). Associations between parental psychological control and behavioral control and youth internalized and externalized behaviors. *Child Development, 65*, 120–1136.
- Berman, S. (1994). Perceived conflict and violence in childhood sibling relationships and later emotional adjustment. *Journal of Family Psychology, 8*, 85–97.
- Blos, P. (1967). The second individuation process of adolescents. *Psychoanalytic Study of the Child, 22*, 162–186.
- Borkowsky, J., Ramey, S. L., & Bristol Power, M. (2002). *Parenting and the child's world. Influences on academic, intellectual, and social-emotional development*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Bowlby, J. (1980). *Attachment and loss. Vol. 3: Loss, sadness and depression*. London: Hogarth Press.
- Broderick, C. (1993). *Understanding family process. Basics of family systems theory*. London: Sage.
- Brody, G. H., Stoneman, Z., & McCoy, J. K. (1994). Forecasting sibling relationships in early adolescence from child temperaments and family processes in middle childhood. *Child Development, 65*, 771–784.
- Brody, G. H., Stoneman, Z., & Burke, M. (1987). Child temperaments, maternal differential treatment and sibling relationships. *Developmental Psychology, 23*, 354–362.
- Bronfenbrenner, U. (1979). *The ecology of human development*. London: Harvard University Press.
- Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon (Series Ed.) & R. M. Lerner (Vol. Ed.), *Handbook of child psychology: Vol. 1. Theory* (5th ed.). New York: Wiley.
- Buhrmester, D. (1992). The developmental course of sibling and peer relationships. In F. Boer & J. Dunn (Eds.), *Children's sibling relationships: Developmental and clinical issues* pp. 19–40. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Buhrmester, D., & Furman, W. (1990). Perceptions of sibling relationships during middle childhood and adolescence. *Child Development, 61*, 1387–1398.
- Bussell, D., Neiderhiser, J., Pike, A., Plomin, R., Simmens, S., Howe, G., Hetherington, E., Carroll, E., & Reiss, D. (1999). Adolescents' relationships to siblings and mothers: A multivariate genetic analysis. *Developmental Psychology, 35*, 1248–1259.
- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement, 20*, 347–372.
- Colarossi, L. G., & Eccles, J. S. (2000). A prospective study of adolescents' peer support: Gender differences and the influence of parental relationships. *Journal of Youth and Adolescence, 29*, 661–678.

- Cole, A. (1996). Qualitative aspects of the sibling relationships: A cross-sectional analysis of the early adolescent years. *Dissertation Abstracts International*, 57(10B), 6646.
- Conger, K., Bryant, C., & Brennon, J. (2004). The changing nature of adolescent sibling relationships: A theoretical framework for evaluating the role of relationship quality. In R. Conger, F. Lorenz, & K. Wickrama (Eds.), *Continuity and change in family relations. Theory, method and empirical findings*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Conger, K., Conger, R., & Scaramella, L. (1997). Parents, siblings, psychological control and adolescent adjustment. *Journal of Adolescent Research*, 12, 113–138.
- Davis, G. (2000). Adolescent depression and the effect of sibling relationships. *Dissertation Abstracts International*, 61(2B), 1076.
- Degirmencioglu, S. M., Urber, K. A., Tolson, J. M., & Richard, P. (1998). Adolescent friendship networks: Continuity and change over the school years. *Merrill-Palmer Quarterly*, 44, 313–337.
- Dunn, J. (1992). Sisters and brothers: Current issues in developmental research. In F. Boer & J. Dunn (Eds.), *Children's sibling relationships*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- East, P. L., & Rook, K. S. (1992). Compensatory patterns of support among children's peer relationships: A test using school friends, nonschool friends, and siblings. *Developmental Psychology*, 28, 163–172.
- Freijo, E., Arranz, E., Malla, R., & Olabarrieta, F. (1993). Children's representations of sibling relationships: Sibling status and child development. *Abstract's book III, European Congress of Psychology* (p. 500). Tampere, Finland: The Psychological Society.
- Geuzaine, C., Debry, M., & Liesens, V. (2000). Separation from parents in late adolescence: The same for boys and girls?. *Journal of Youth and Adolescence*, 29, 79–92.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Golombock, S. (2000). *Parenting*. London: Routledge.
- Gray, M. J., & Steinberg, L. (1999). Unpacking authoritative parenting: Reassessing a multidimensional construct. *Journal of Marriage and the Family*, 61, 574–587.
- Grych, J., & Fincham, F. (1990). Marital conflict and children's adjustment: A cognitive-contextual framework. *Psychological Bulletin*, 11, 15–27.
- Harter, S. (1990). Self and identity development. In S. S. Feldman & G. R. Elliott (Eds.), *At the threshold: The developing adolescent* (pp. 352–375). Cambridge, MA: Harvard University Press.
- Hinde, J., & Hinde, J. S. (1979). *Relationships within families: Mutual influences*. Oxford: Clarendon Press.
- Jacobson, K. C., & Crockett, L. J. (2000). Parental monitoring and adolescent adjustment: An ecological perspective. *Journal of Research on Adolescence*, 10, 65–97.
- Jodi, K., Bridges, M., Kim, J., Mitchell, A., & Chan, R. (1999). Relations among relationships: A family systems perspective. In E. Hetherington, S. Henderson, & D. Reiss (Eds.), *Adolescent siblings in stepfamilies: Family functioning and adolescent adjustment. Monographs of the Society for Research on Child Development*, 64, 150–183; Serial No. 227.
- Kramer, L., & Gottman, J. M. (1992). Becoming a sibling: "With a little help from my friends." *Developmental Psychology*, 28, 685–699.
- 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.
- Lamborn, S. D., Mounts, N. S., Steinberg, L., & Dornbusch, S. M. (1991). Pattern of competence and adjustment among adolescents from authoritative, authoritarian, indulgent and neglectful families. *Child Development*, 62, 1049–1065.

- Lempers, J., & Clark-Lempers, D. (1992). Young, middle and late adolescents' comparisons of the functional importance of five significant relationships. *Journal of Youth and Adolescence*, 21, 53–96.
- MacKinnon-Lewis, C., Starnes, R., Volling, B., & Johnson, S. (1997). Perceptions of parenting as predictors of boys' sibling and peer relations. *Developmental Psychology*, 33, 1024–1031.
- Noller, P., Feeney, J. A., Sheehan, G., & Peterson, C. (2000). Marital conflict patterns: Links with family conflict and family members' perceptions of one another. *Personal Relationships*, 7, 79–94.
- Reese-Weber, M. (2000). Middle and late adolescents' conflict resolution skills and siblings: Associations with interparental and parent–adolescent conflict resolution. *Journal of Youth and Adolescence*, 29, 697–711.
- Reese-Weber, M., & Bartle-Haring, S. (1998). Conflict resolution styles in family subsystems and adolescent romantic relationships. *Journal of Youth and Adolescence*, 27, 735–752.
- Rosenberg, M. (1965). *Society and adolescent self-image*. Princeton, NJ: Princeton University Press.
- Savin-Williams, R. C., & Berndt, T. J. (1990). Friendship and peer relations. In S. S. Feldman & G. R. Elliott (Eds.), *At the threshold: The developing adolescent*. Cambridge, MA: Harvard University Press.
- Schaeffer, C., & Borduin, C. (1999). Mother–adolescents–sibling conflict in families of juvenile felons. *Journal of Genetic Psychology*, 160, 115–118.
- Seginer, R. (1998). Adolescents' perceptions of relationships with older sibling in the context of other close relationships. *Journal of Research on Adolescence*, 8, 287–308.
- Sharabany, R. (1994). Intimate friendship scale: Conceptual underpinnings psychometric properties and construct validity. *Journal of Social and Personal Relationships*, 11, 449–469.
- Slavin, L. A., & Rainer, K. L. (1990). Gender differences in emotional support and depressive symptoms among adolescents: A prospective analysis. *American Journal of Community Psychology*, 18, 407–421.
- Sroufe, L. A., & Fleeson, J. (1986). Attachment and the construction of relationships. In W. Hartup & Z. Rubin (Eds.), *Relationships and development*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Stattin, H., & Kerr, M. (2000). Parental monitoring: A reinterpretation. *Child Development*, 71, 1070–1083.
- Steinberg, L., Mounts, N. S., Lamborn, S. D., & Dornbusch, S. M. (1991). Authoritative parenting and adolescent adjustment across varied ecological niches. *Journal of Research on Adolescence*, 1, 19–36.
- Steinberg, L. (2001). We know some things: Adolescent–parent relationships in retrospect and prospect. *Journal of Research on Adolescence*, 11, 1–20.
- Steinberg, L., & Morris, A. S. (2001). Adolescent development. *Annual Review of Psychology*, 52, 83–110.
- Steinberg, L., & Silk, J. S. (2002). Parenting adolescents. In I. Bornstein (Ed.), *Handbook of parenting: Vol. I. Children and parenting*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Steinberg, L., & Silverberg, S. B. (1986). The vicissitudes of autonomy. *Child Development*, 57, 841–851.
- Steinberg, L., Lamborn, S. D., Darling, N., Mounts, N. S., & Dornbusch, S. M. (1994). Over-time changes in adjustment and competence among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development*, 65, 754–770.
- Sutton, L. (1996). Gender differences in sibling/parent relationships and adjustment. *Dissertation Abstracts International*, 57(3B), 2183.
- Tucker, C., Barber, B., & Eccles, J. (1997). Advice about life plans and personal problems in late adolescent sibling relationships. *Journal of Youth and Adolescence*, 26, 63–76.

- Updegraff, K., McHale, S., & Crouter, A. (2000). Adolescent sex-typed friendship experiences: Does having a sister versus a brother matter? *Child Development, 71*, 1597–1610.
- Updegraff, K., McHale, S., & Crouter, A. (2002). Adolescents' sibling relationship and friendship experiences: Developmental patterns and relationship linkages. *Social Development, 11*, 182–204.
- Yeh, H. C. (2001). The influences of sibling relationships in adolescence. *Dissertation Abstracts International, 62*(2A), 794.
- Yenes, F., Olabarrieta, F., Arranz, E., & Artamendi, J. A. (2000). Inter-rater reliability of a category system on children's representations of sibling relationships. *Psicothema, 12*, 563–566.