VOLUME 29, NUMBER 1

CHILD STUDY JOURNAL

LONELINESS AND SOCIAL DISSATISFACTION: ITS RELATION WITH CHILDREN'S SELF-EFFICACY FOR PEER INTERACTION

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We examined the relation of children's loneliness and social dissatisfaction in school to self-efficacy for peer interaction in the same context. Two hundred thirty-eight fourth- and sixth-grade Greek children completed Asher, Hymel, and Renshaw's (1984) Loneliness and Social Dissatisfaction Questionnaire--Greek version, and Wheeler and Ladd's (1982) Children's Self-Efficacy for Peer Interaction Scale--Greek version. The instruments showed adequate reliability and validity. Results indicated a modest but significant negative correlation between the variables studied. The correlation was stronger for social dissatisfaction than for loneliness; also, loneliness and social dissatisfaction were higher for the nonconflict than for the conflict peer interactions, and this finding was consistent across grade and sex. Sixth graders had marginally significantly higher loneliness scores than fourth graders, and girls had marginally significantly higher loneliness scores than boys. School achievement was negatively related to social dissatisfaction. Results are discussed in terms of the existing literature on children's loneliness and self-efficacy.

The peer group is the most important social network in children's lives and has a high predictive value of an individual's later social and emotional adjustment. There is a large body of literature concerning children's affective experiences in relation to peer group dynamics, sociometric status, friendships, behavior in that group, social self-esteem and so forth (e.g. Asher & Coie, 1990; Asher, Hymel, & Renshaw, 1984; Asher & Wheeler, 1985; Boivin, Poulin, & Vitaro, 1994; Parker & Asher, 1993).

However, relatively few studies have attempted to investigate children's affective experiences in the peer group in relation to perceived social competence in the same context. In a recent longitudinal study (Hymel, Rubin, Rowden, & LeMare, 1990), a very high negative correlation (r = -.75) was found between loneliness and the social competence subscale of Harter's Perceived Competence Scale for Children (Harter, 1982); also, a high negative correlation (r = -.58) was found between loneliness and general self-worth. Another important finding of this study was that children's low perceived social competence in the second grade predicted significantly (accounted for 15% of the variance) strong feelings of loneliness in the fifth grade.

An important facet of perceived social skills is the concept of social self-efficacy expectation. According to Bandura (1982), self-efficacy, in general, "is concerned with judgments of how well one can execute courses of action required to deal with prospective situations" (p. 122). Self-efficacy beliefs determine which activities we undertake and which ones we avoid, as well as how much effort we will expend and how long we will persist in the face of obstacles and aversive experience. Social self-efficacy, in particular, is the belief that one has the skills for a successful performance in specific social situations--in peer interactions for children in particular.

The fact that self-efficacy is a reliable predictor of behavior and an indicator of mental health in adults has been recognized by a number of Bandura and his colleagues' theoretical and empirical studies (e.g. Bandura, 1977; 1982; 1995; 1997; Bandura & Adams, 1977). Quite recently in Greece, a group therapy program for the enhancement of self-efficacy expectations among university students has succeeded in improving their psychosomatic health (Kalantzi-Azizi & Karadimas, 1996; Kalantzi-Azizi, Karadimas, Sotiropoulou, & Moraitou, 1998). Nevertheless, there are few studied concerning this facet of self-efficacy in children and adolescents. Wheeler and Ladd (1982) found the expected significant negative correlations (r = -.36 through r = -.49) between prosocial persuasive skills in the peer interaction of third- through fifth-grade children and the anxiety subscale of the Piers-Harris Self-Concept Scale. In another study (Connoly, 1989) with 14- through 19-year-old adolescents, social self-efficacy expectation in the peer group (the peer group holds a prominent position in an adolescent's life) had a significant negative correlation with withdrawal rated by teachers in high school students (r = -.39) and in emotionally disturbed adolescents (r = -.25). A significant moderate negative correlation was also found between self-efficacy and the Internalizing subscale (anxiety, social withdrawal, overcontrol) of the Achenbach and Edelbrock's Child Behavior Checklist completed by parents (r = -.26) and by the nursing staff (r = -.25) for the high school students and the emotionally disturbed adolescents, respectively. Expectations of an impaired mastery of skills for social interaction seem to provoke and/or reinforce feelings of anxiety, especially when those interactions are essential for the individuals' mental health and are highly valued by the latter.

In a recent study in Greece (Galanaki, 1994), fourth- and sixth-grade children associated their classmates' feelings of loneliness with the social skills of the latter. Children stated that

their lonely classmates "sit idle during the breaks", "don't try to make friends" and so forth. In addition, when they were asked about ways of coping with loneliness (Galanaki & Besevegis, 1996), many of them stated: "I try to convince other kids to play with me"; "I apologize for my bad behavior in front of other kids"; "I try to find other kids and make them my best friends--and this needs a lot of courage", and so forth. These statements illustrate the important role that perceived social competence plays in children's adaptation in the social world.

As far as we know, there is not even one study examining children's feelings of loneliness in relation to social self-efficacy beliefs. Such a study is suggested for the following reasons: (a) In those few studies that have examined the relation between loneliness and social self-concept, the instruments used seem to have a rather high overlap of items (such as, "I have a lot of friends", "It's easy for me to make friends", etc.), thus, yielding inflated correlations. (b) The peer group is the *arena* where children acquire social skills, practice them, and test their effectiveness in producing the desired results. Bandura (1997), in a developmental analysis of self-efficacy, stressed the important role peers play in broadening and refining children's appraisals of their interpersonal capabilities. The most experienced and competent peers serve as models of efficacious behaviors, measures of social comparison and sources of information for the formation of self-efficacy judgments. Bandura (1997), stated, "...disrupted or impoverished peer relationships can adversely affect the growth of personal efficacy. A low sense of social efficacy, in turn, can create attitudinal and behavioral obstacles to favorable peer relationships" (p. 173).

The most likely outcome of the difficulties in peer relationships is low peer status or even rejection (Asher, 1983; Ladd, 1981). Low peer status, in turn, bears a strong link with feelings of loneliness (see Asher, Parkhurst, Hymel, & Williams, 1990, for a review). Moreover, children spontaneously focus on the peer system when asked to define loneliness (Cassidy & Asher, 1992; Galanaki & Besevegis, 1996; Hayden, Tarulli, & Hymel, 1988).

Greek children defined loneliness as a state in which one is without friends to play or to discuss with or is rejected by peers, and for these reasons experience unpleasant emotions, especially sadness and boredom (Galanaki & Besevegis, 1996). This definition is in accordance with the results of the three aforementioned investigations on children's definitions of loneliness, and with Asher's conceptualization of loneliness, as is illustrated in his Loneliness and Social Dissatisfaction Questionnaire, a Greek adaptation of which is used in this study. The focus on the peer

system is clearly seen in this definition, and justifies the emphasis we place here on peer interaction.

Self-efficacy for social interaction with peers is the child's evaluation of his or her ability to persuade his or her peers so as to influence their behavior and feelings in socially acceptable ways (Wheeler & Ladd, 1982). Therefore, self-efficacy concerns: (a) prosocial persuasive skills, which are an important aspect of social competence; and (b) the peer interactions. These skills are assessed both in conflict, that is, difficult situations, where the persuasive goal of the child is in direct opposition with the goal of the peer, and in nonconflict, that is, easy situations, where there is no contradiction between child and peer. Social self-efficacy is assessed here in particular situations; this follows Bandura's view (1982) that self-efficacy, in order to predict accurately an individual's behavior and affective reactions, should be assessed in particular situations, some of which require a large number of skills and the negative outcome is probable, and some of which require fewer skills and a positive outcome is expected--and not as a general disposition assessed by one global instrument.

A negative correlation between loneliness and social dissatisfaction on the one hand and social self-efficacy on the other is hypothesized. We certainly do not expect a correlation as high as the one reported by Hymel et al. (1990) for perceived social competence, because in that study there was a considerable overlap of items between the Loneliness and Social Dissatisfaction Questionnaire and the Harter's Perceived Competence Scale for Children. Also, we expect this correlation to be stronger for the nonconflict component of social self-efficacy than for the conflict component. This hypothesis is drawn from Bandura's (1982; 1997) assumption that depressive feelings (self-devaluation, despondency, futility) and dysfunctional beliefs concerning future attempts and performances (e.g., "I'm a failure", "Nobody wants me as a friend") emerge when we have a low self-efficacy expectation together with a high outcome expectation, that is, when we perceive ourselves as lacking the necessary skills and perceive others who have similar characteristics to our own as having those skills and enjoying the positive outcomes of their performance. Nonconflict peer interactions seem to be easy--the majority of children cope well in them--and this is something we assume children are, to some extent, aware of. The comparison of social self-efficacy scores between nonconflict and conflict situations is a way to test this hypothesis.

Finally, it would be useful to examine grade, sex and school achievement effects on the two variables studied and compare these results with those of other investigations in the U.S.A.

Method

Subjects

The sample consisted of 238 children (mean age, 10.4 years)--103 fourth graders (mean age, 9.3 years) and 135 sixth graders (mean age, 11.2 years); 133 were boys and 105 were girls. The majority of the children (139) came from Athens (mainly from middle-class background), and 99 children came from semi-rural areas.

Measures

Loneliness and Social Dissatisfaction Questionnaire (Asher et al., 1984)--*Greek Version.* This version consists of 21 items assessing: (a) Children's feelings of loneliness, for example, "Are you lonely at school?"; (b) children's perceptions of the degree to which important social provisions are being met, for example, "Are there kids you can go to when you need help in school?"; (c) children's appraisal of their current peer relationships, for example, "Do you have lots of friends at school?"; and (d) children's perception of their social competence, for example, "Are you good at working with other kids at school?"

In a preliminary study, 44 children (23 fourth graders and 21 sixth graders) were asked to define loneliness. Their answers were used as a base for the construction of seven more items (items 15 through 21) assessing feelings of social isolation, for example, "Have you ever sat in a corner at school and had no one to talk to?", as well as unfulfilled relationship provisions, for example, "Can you find a friend to whom you can tell your secrets at school?" Also, the preliminary study showed that some children did not understand well the 5-point scale and the negatively or positively stated items of the original instrument; Greek school-age children are not accustomed to multiple choice tests. For this reason, we preferred the modified questionnaire Cassidy and Asher (1992) used for younger children (kindergarten and first grade). The scale was a 3-point one (1 = *Yes*, 2 = *Sometimes*, 3 = *No*), and the items were given in the form of questions. We removed two negatively stated items (i.e., "Is it hard for you to make friends at school?", and "Is it hard for you to get along with other kids at school?") from the original 24-item instrument to avoid repetition. The eight hobby or interest items were also removed to avoid a lengthy and tiresome questionnaire. The resulting Greek version of the Loneliness and Social Dissatisfaction Questionnaire is present in Table 1. The higher the score the greater the loneliness and social dissatisfaction. Items 5, 10, and 12 are the

"pure" *loneliness* items and the rest of the items are the *social dissatisfaction* items; Cassidy and Asher (1992) and Luftig (1987) suggested this distinction. The small number of the loneliness items can be attributed to the fact that there are so few ways of asking children about being lonely without repeating oneself. In the subsequent analyses, we attempt to examine loneliness and social dissatisfaction both combined and separately.

TABLE 1
Percentage Distribution of Children's Responses to Loneliness and Social Dissatisfaction Items

Loneliness and social dissatisfaction items	Response Yes	Sometimes	No
1. Is it easy for you to make new friends at school?[b]	59.7	32.4	8.0
2. Do you have other kids to talk to at school?[b]	62.6	30.7	6.7
3. Are you good at working with other kids at school?[b]	76.9	19.3	3.8
4. Do you have lots of friends at school?[b]	85.7	13.0	1.3
5. Do you feel alone at school?[a]	6.7	31.1	62.2
6. Can you find a friend when you need one?[b]	56.3	31.9	11.8
7. Is it hard to get kids in school to like you?[b]	13.0	42.9	44.1
8. Do you have kids to play with at school?[b]	81.9	15.5	2.5
9. Do you get along with other kids at school?[b]	84.9	13.0	2.1
10. Do you feel left out of things at school?[a]	8.4	40.8	50.8
11. Are there kids you can go to when you need help in school?[b]	64.3	31.1	4.6
12. Are you lonely at school?[a]	5.5	34.9	59.7
13. Do the kids at school like you?[b]	69.3	25.6	5.0
14. Do you have friends at school?[b]	77.3	21.4	1.3
15. Do you have a kid to like you at school?[b]	59.2	30.3	10.5
16. Can you find a friend to whom you can tell your secrets at school?[b]	45.8	39.9	14.3
17. During the breaks, do you sit alone in class?[b]	2.9	20.2	76.9
18. Has it ever happened to you to play with other kids and then be left alone by them?[b]	9.2	39.5	51.3
19. Have you ever sat in a corner at school and had no one to talk to?[b]	8.0	28.2	63.9
20. Have you ever felt lonely at school and wished a kid would come and play with you?[b]	10.9	23.9	65.1
21. Do you have a kid to care for you at school?[b]	55.9	39.5	4.6

Note. [a]Loneliness items; [b]social dissatisfaction items. For items 5, 7, 10, 12, 17, 18, 19, and 20 the scoring was reversed.

Children's Self-Efficacy for Peer Interaction Scale (Wheeler & Ladd, 1982)--*Greek version.* This version consists of 20 items with a 4-point scale (1 = *Hard!*, 4 = *Easy!*) that assesses the two main tactics (i.e., requests and imperatives) children use in their interactions with peers, in order to influence the behavior and feelings of others in socially acceptable ways. These assertive verbal skills were assessed in nonconflict and conflict interactions. A typical nonconflict situation is: "You want to start a game. Asking other kids to play the game is *Hard!*, hard, easy, *Easy!* for you." A typical conflict situation is: "A kid tries to take your turn during a game. Telling the kid it's your turn is *Hard!*, hard, easy, *Easy!* for you." The higher the score the greater the self-efficacy for peer interaction. Wheeler and Ladd (1982) reported results of a factor analysis that clearly distinguishes two factors, the first one including the conflict items and the second one the nonconflict items. The same authors present further data that support the convergent validity of the scale.

Children in the preliminary study understood the scale well. They were instructed orally that "*Hard!*" means very hard, "hard" means just hard, "easy" means just easy, and "*Easy!*" means very easy. These instructions were used in the main study as well. Two items concerning lunch and teams at school were removed because of their irrelevance to the Greek educational system. The remaining items are 12 conflict and 8 nonconflict items.

Measurement of school achievement. In Greek primary schools, school achievement is officially assessed on a 10-point scale, which is further categorized as follows: Failure (0-4), low (5-6), average (7-8), and high achievement (9-10). These points represent the rounded mean of all the grades a child received. In this study there were no children in the failure range.

Procedure

Children completed the questionnaires in a group testing session in each classroom. The first author and four female assistants administered the questionnaires. The procedure lasted about 45 minutes. Teachers were not present during the administration. About half of the respondents were given first the Loneliness and Social Dissatisfaction Questionnaire and, second, the Children's Self-Efficacy for Peer Interaction Scale, whereas in the other half the order was reversed. The instructions were as follows: "You are going to take part in a survey which aims at understanding what children of your age think and believe about themselves and others. The survey has nothing to do with the

school and your grades. There are no right or wrong answers. The only thing you have to do is just answer according to your opinion." Children were first trained to the use of the rating scales by responding to sample items, such as: "Do you play football?"

Results

Descriptive Findings

Table 1 presents descriptive information about the distribution of children's responses to the Loneliness and Social Dissatisfaction Questionnaire.[1] The percentages of children who chose the upper scale point, that is, experienced strong feelings of loneliness, ranged from 1.3 to 14.3 (with a median of 6.70); these percentages were lower than those reported by Cassidy and Asher (1992).

Means and standard deviations of the two variables studied for the whole sample and for each grade and sex are shown in Table 2. A series of paired t tests revealed a statistically significant difference between loneliness and social dissatisfaction scores for the entire sample (marginal), t (237) = 1.86, p <.06; for sixth-graders, t (134) = 3.47, p <.001; and for girls, t (104) = 2.56, p <.02. In all those cases, loneliness scores were significantly higher than social dissatisfaction scores (see Table 2). The differences between loneliness and social dissatisfaction scores was nonsignificant for fourth graders and for boys. Also, a series of paired t tests showed a statistically significant difference between nonconflict and conflict scores for the entire sample, t (237) = 4.50, p <.0001; for fourth-graders, t (102) = 3.07, p <.005; for sixth-graders, t (134) = 3.29, p <.001; for boys, t (132) = 4.40, p <.05; and marginally significant finding for girls, t (104) = 1.71, p <.09. In all these cases, nonconflict scores are significantly higher than the conflict ones (see Table 2).

Reliability and Validity of the Instruments

Table 3 indicates that both instruments have adequate internal consistency. The Loneliness and Social Dissatisfaction Questionnaire; as well as its two components (loneliness and social dissatisfaction), have a higher internal consistency for sixth-graders than for fourth graders, but this is not the case with the Children's Self-Efficacy for Peer Interaction Scale, Asher et al. (1984), Boivin et al. (1994), Cassidy and Asher (1992), as well as Wheeler and Ladd (1982) reported similar results for the original instruments. Although the internal consistency is lower for the

loneliness than for the social dissatisfaction component, it seems adequate, taking into account that the loneliness component consists only of 3 items.

TABLE 2

Means and Standard Deviations of Loneliness and Social Dissatisfaction and of Self-Efficacy for Peer Interaction by Grade, Sex, and for the Entire Sample

Variable	4th Grade (n = 103)		6th Grade (n = 135)		Boys (n = 133)		Girls (n = 105)		Total (N = 238)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Loneliness and Social Dissatisfaction	1.40	0.28	1.39	0.31	1.38	0.30	1.41	0.29	1.40	0.30
Loneliness	1.37	0.47	1.47	0.47	1.38	0.47	1.48	0.46	1.43	0.47
Social Dissatisfaction	1.40	0.28	1.37	0.30	1.38	0.29	1.39	0.29	1.38	0.29
Self-Efficacy for Peer Interaction	3.00	0.46	3.00	0.43	2.97	0.44	3.03	0.44	3.00	0.44
Nonconflict	3.09	0.50	3.08	0.43	3.08	0.45	3.08	0.47	3.08	0.46
Conflict	2.96	0.52	2.97	0.52	2.92	0.53	3.02	0.49	2.96	0.51

Note. Loneliness and social dissatisfaction: 1-3; self-efficacy: 1-4; the higher the score, the greater the loneliness and social dissatisfaction, and the self-efficacy.

TABLE 3

Reliability Coefficients (Cronbach Alpha) of the Instruments by Grade, Sex and for the Whole Sample

Scale	Fourth Grade (n = 103)	Sixth Grade (n = 135)	Boys (n = 133)	Girls (n = 105)	Total (N = 238)
Loneliness and social Dissatisfaction	.80	.87	.85	.85	.85 (.90; .81; .79)[a]
Loneliness	.57	.66	.62	.62	.62
Social Dissatisfaction	.77	.85	.82	.82	.82
Self-Efficacy for Peer Interaction	.85	.83	.84	.84	.84. (.85)[b]
Nonconflict	.75	.62	.70	.68	.69 (.73)[b]
Conflict	.80	.80	.81	.78	.80 (.85)[b]

Note. [a]Reported by Asher et al. (1984), Boivin et al. (1994), and Cassidy & Asher (1992), respectively; [b]reported by Wheeler & Ladd (1982).

Factor analysis (principal axes factoring with a quartimax rotation) on the Greek version of the Loneliness and Social Dissatisfaction Questionnaire revealed that all 21 items loaded significantly on the first factor, a finding similar to that reported by Asher et al. (1984), as well as by Cassidy and Asher (1992), for the original instrument and the modified version for younger children, respectively. Factor loadings for each item and item-total correlations are presented in Table 4.

TABLE 4
Factor Loadings and Item-Total Correlations of the Loneliness and Social Dissatisfaction Items

Item	Factor Loading	Item-Total Correlation
1	.49	.41
2	.42	.36
3	.38	.38
4	.56	.51
5	.45	.50
6	.37	.35
7	.31	.24
8	.63	.55
9	.54	.48
10	.43	.49
11	.48	.42
12	.44	.45
13	.69	.54
14	.66	.55
15	.35	.31
16	.36	.31
17	.53	.53
18	.38	.43
19	.30	.43
20	.20	.31
21	.59	.51

Factor analysis (principal axes factoring with a quartimax rotation) on the Children's Self-Efficacy for Peer Interaction Scale confirmed the two factor structure of the instrument, a finding similar to that reported by Wheeler and Ladd (1982). The first factor included the conflict items and the second one the noncon-

flict items (although two of the conflict items loaded significantly only on the second factor).

The correlation between the loneliness and the social dissatisfaction total scores of the Loneliness and Social Dissatisfaction Questionnaire was $r = .57$, $p < .0001$, and the correlation between the nonconflict and the conflict total scores of the Children's Self-Efficacy for Peer Interaction Scale was $r = .64$, $p < .0001$. Wheeler and Ladd (1982) reported a lower correlation ($r = .46$) between the nonconflict and the conflict items. These correlations indicate that the instruments measured two distinct but related components (see Table 5; see also Tables 6 and 7 for each grade and sex).

TABLE 5
Correlation Coefficients (Pearson r's) Between the Variables For the Whole Sample (N = 238)

Variable	1	2	3	4	5
Loneliness and Social Dissatisfaction	---				
Loneliness	[a]	---			
Social Dissatisfaction	[a]	.57***	---		
Self-Efficacy for Peer Interaction	-.29***	-.17*	-.29***	---	
Nonconflict	-.31***	-.17*	-.31***	[a]	---
Conflict	-.21**	-.11	-.21**	[a]	.64***

Note. [a]Inflated correlations due to the items' overlap are not reported.
*$p < .05$. **$p < .01$. ***$p < .001$.

Grade and Sex Effects

A 2 x 2 (Grade x Sex) multivariate analysis of variance (MANOVA) with the two components (loneliness and social dissatisfaction) of the Loneliness and Social Dissatisfaction Questionnaire was conducted. Although the multivariate effect for sex was nonsignificant, there was a marginally statistically significant univariate effect of sex on loneliness, F (1,234) = 3.62, $p < .06$. Girls had marginally significantly higher loneliness scores than boys (see Table 2). The multivariate effect for grade was statistically significant, *Pillai's* = 0.03, F (2,233) = 4.00, $p < .02$. The univariate effect of grade on loneliness was marginally significant,

F (1,234) = 3.50, p <.08. Sixth graders had marginally significantly higher loneliness scores than fourth graders (see Table 2). No other multivariate or univariate effects were significant.

Next, a 2 x 2 (Grade x Sex) MANOVA with the two components (nonconflict and conflict) of the Self-Efficacy for Peer Interaction Scale was conducted. There were not any significant multivariate or univariate effects.

TABLE 6

Correlation Coefficients (Pearson r's) Between the Variables by Grade (4th Grade: n = 103, 6th Grade: n = 135)

Variable	1	2	3	4	5	6
Loneliness and S D[b]	---	[a]	[a]	-.23**	-.21*	-.18*
Loneliness	[a]	---	.64***	-.15	-.09	-.13
Social Dissatisfaction	[a]	.51***	---	-.24**	-.23**	-.17*
Self-Efficacy for P I[c]	-.36***	-.19*	-.36***	---	[a]	[a]
Nonconflict	-.42***	-.24*	-.42***	[a]	---	.66***
Conflict	-.25**	-.10	-.26**	[a]	.62***	---

Note. Correlations for the 4th grade are given below the diagonal; correlations for the 6th grade are given above the diagonal.
[a]Inflated correlations due to the items' overlap are not reported. [b]Social Dissatisfaction. [c]Peer Interaction.
*p <.05. p <.01. ***p <.001.

TABLE 7

Correlation Coefficients (Pearson r's) Between the Variables by Sex (Boys: n = 133, Girls: n = 105)

Variable	1	2	3	4	5	6
Loneliness and S D[b]	---	[a]	[a]	-.27**	-.28**	-.21*
Loneliness	[a]	---	.54***	-.15	-.10	-.13
Social Dissatisfaction	[a]	.60***	---	-.27**	-.30**	-.21*
Self-Efficacy for P I[c]	-.31***	-.20*	-.31***	---	[a]	[a]
Nonconflict	-.32***	-.22*	-.32***	[a]	---	.69***
Conflict	-.21*	-.12	-.22*	[a]	.62***	---

Note. Correlations for the boys are given below the diagonal; correlations for the girls are given above the diagonal.
[a]Inflated correlations due to the items' overlap are not reported. [b]Social Dissatisfaction. [c]Peer Interaction
*p <.05. **p <.01. ***p <.001.

School Achievement

A 2 x 2 x 3 (Grade x Sex x School Achievement) MANOVA with the two components (loneliness and social dissatisfaction) of the Loneliness and Social Dissatisfaction Questionnaire was conducted. There was a marginally significant multivariate effect for school achievement, *Pillai's* = 0.04, F (4,452) = 2.17, p <.07. The univariate effect of school achievement on social dissatisfaction was statistically significant, F (2,226) = 4.40, p <.01. Post hoc Scheffe comparisons indicated that children with low school achievement had significantly higher social dissatisfaction scores, M = 1.51, SD = 0.36, than children with high school achievement, M = 1.34, SD = 0.26; children with average school achievement, M = 1.40, SD = 0.28, did not differ significantly from the other two groups as to social dissatisfaction. The interaction effects were nonsignificant.

Next, a 2 x 2 x 3 (Grade x Sex x School Achievement) MANOVA with the two components (nonconflict and conflict) of the Self-Efficacy for Peer Interaction Scale did not yield any significant multivariate or univariate effect of school achievement.

Loneliness-Social Dissatisfaction and Self-Efficacy for Peer Interaction

Table 6 shows the expected statistically significant negative correlation between feelings of loneliness and social dissatisfaction on the one hand and social self-efficacy on the other. This modest correlation is found for each grade and sex (see Tables 6 and 7, respectively); the maximum explained variance is 17.6%. As expected, the correlation between loneliness and social dissatisfaction on the one hand and social self-efficacy on the other is stronger for the nonconflict than for the conflict component. This finding is consistent across grade and sex, and for loneliness and social dissatisfaction examined separately.

Another interesting finding is that social self-efficacy--combined and for the nonconflict and the conflict component separately--is more strongly related to feelings of social dissatisfaction than to feelings of loneliness, and this is consistent across grade and sex. There is also a tendency for a stronger correlation between the two variables studied for fourth graders (maximum explained variance: 17.6%) than for sixth graders (maximum explained variance: 5.8%), and for boys (maximum explained variance: 10.2%) than for girls (maximum explained variance: 9%), but it does not reach statistical significance.

Next, we distinguished three levels (low, average, high) in feelings of loneliness-social dissatisfaction and in self-efficacy for

peer interaction. In the high level we classified those subjects having one *SD* above the sample mean; in the low level those having one *SD* below the mean; and in the average level all the rest. Table 8 shows that 40.4% of those children who were classified as low in loneliness and social dissatisfaction scores evaluated their social self-efficacy as high--and this is an expected finding. However, only 22.2% of the extremely lonely children perceived their social self-efficacy as low. Another interesting finding is the large percentage (69.4%) of the extremely lonely children who had an average self-efficacy expectation, and the 59.6% of children classified as low in loneliness and social dissatisfaction scores who rated their social self-efficacy as average.

TABLE 8

Percentage Distribution of Children by Level of Loneliness and Social Dissatisfaction and Self-Efficacy for Peer Interaction

Self-Efficacy for Peer Interaction	Loneliness and Social Dissatisfaction					
	Low		Average		High	
	f	%	*f*	%	*f*	%
Low	---	---	29	18.7	8	22.2
Average	28	59.6	108	69.7	25	69.4
High	19	40.4	18	11.6	3	8.3

χ^2 (4, N = 238) = 29.53, p <.00001.

Discussion

This study examines for the first time the relation of children's loneliness and social dissatisfaction in school to self-efficacy for peer interaction in the same context. Relatively few studies have examined children's affective experiences from the peer group in relation to perceived social competence, yet it is of great importance to understand children's own perspective on their social situation and the related feelings.

The Greek versions of the two instruments used in this study have adequate reliability (internal consistency). The Loneliness and Social Dissatisfaction Questionnaire has a higher reliability for sixth graders than for fourth graders, whereas for the Children's Self-Efficacy for Peer Interaction Scale there was no such finding. Loneliness and social dissatisfaction, as well as social self-efficacy for nonconflict and for conflict situation, were distinct but related components. This finding explains why they

are included in the same questionnaire and why we examine them combined and separately.

The inclusion of the seven items measuring social isolation and unfulfilled relationship provisions seems to enhance the content validity of the Loneliness and Social Dissatisfaction Questionnaire. The content of these items was very frequently reported by children in their definitions of loneliness in a pilot study and in a later study on children's conception of loneliness (Galanaki & Besevegis, 1996). The factor structure of this version seems to be similar to that of the original instrument, although the factor loadings and the item-total correlations were not as strong as those reported by Asher and his colleagues.

An indication for the validity of the Children's Self-Efficacy for Peer Interaction Scale is that nonconflict scores are significantly higher than the conflict ones. This illustrates the fact that children's judgments about their social self-efficacy vary by situation, a finding similar to that of the original instrument and supportive of Bandura's theory. Therefore, a child finds those situations where his or her goal is in opposition with the goal of the peer (e.g., the child wants to persuade the peer to play a game that the peer does not like) more difficult than those situations in which there is no such opposition (e.g., the child wants to persuade the peer to play a game they both like). In addition, older children as well as girls are found to be more lonely than socially dissatisfied, but this is not the case for younger children and for boys.

The percentage of children who experience much loneliness (they chose the upper scale point) is not so large as that of the U.S.A. studies. We assume that this finding is partly due to some features characteristic of the Greek society--the extended family, the neighborhood, several sources of support in the community and so forth--and partly to the exclusion of the two negatively stated items (i.e., "Is it hard for you to make friends at school?" and "Is it hard for you to get along with other kinds at school?") from the questionnaire. Although this exclusion seems to be necessary in order to avoid a tiresome instrument for the unaccustomed to such testing conditions of Greek children, we now believe that they should not be excluded in any further studies.

Sixth graders (about 11 years old) are lonelier than fourth graders (about 9 years old)--and this is the case for both boys and girls--but the finding is only marginally significant. Quay (1992) reported similar results, and Parkhurst and Asher (1992) found young adolescents to be lonelier than elementary school children.

In this study, preadolescents seem to be more preoccupied with their negative inner feelings than younger children and may indeed feel lonely. Another suggestion is that older children have a better understanding of their feelings than younger ones, and this may be due to their more advanced level of cognitive maturity and to social experience. This last explanation is supported also by the finding of another study (Galanaki & Besevegis, 1996), namely, that the percentage of preadolescents who did not understand what loneliness means was much lower than that of younger children.

Girls seem to be lonelier than boys (although only marginally) or, at least, admit feelings of loneliness in the questionnaire more easily than boys do--and this is the case for both age groups studied, whereas there is no sex difference concerning social dissatisfaction. The above sex difference may be attributed to several causes. Perhaps, boys seek company and want to be occupied with several activities more often than girls. In our recent study on ways of coping with loneliness (Galanaki & Besevegis, 1996), boys were found to occupy themselves with outdoor activities (e.g., sports, riding a bicycle) more often than girls did. Another possible explanation is that girls are brought up to place a great emphasis on relationships and the resulting feelings, and so they talk about feelings more openly than boys do. Both explanations stem from the differential socialization of boys and girls, which is still very prominent in the Greek society.

No grade or sex differences are found for social self-efficacy. Age and sex do not differentiate self-efficacy beliefs for peer interaction, a finding consistent with that reported by Wheeler and Ladd (1982).

School achievement is negatively related to social dissatisfaction in school and not to feelings of loneliness per se: Children with low school achievement report feeling greater social dissatisfaction than children with high school achievement. These results agree, in general, with those of other studies assessing reading ability (Quay, 1992), learning disabilities (Margalit & Efrati, 1996), and mild mental retardation (Williams & Asher, 1992), whereas Asher et al. (1984) did not find any such differences, perhaps because they used continuous scores and did not differentiate among achievement levels. We suggest that low school achievement and high social dissatisfaction are components of a particular child profile, that may also include low academic self-esteem, mild or severe learning disabilities, low peer status or even peer rejection and so forth. In the previous mentioned Greek study on ways of coping with loneliness, a considerable percentage of children reported reading books as a way of

reducing this unpleasant feeling. All these findings support an additional explanation offered by Quay (1992): That at least some children use reading as a diversion from loneliness. However, social self-efficacy is not related to school achievement. Besides, Wheeler and Ladd (1982) have found that self-efficacy for peer interaction is not related to academic self-esteem (assessed by Harter's Perceived Competence Scale for Children, 1982).

As expected, the overall relation of loneliness and social dissatisfaction to social self-efficacy for peer interaction is modest but significant. The explicit tendency for stronger correlations among younger children than the older ones, although nonsignificant, might be attributed to the fact that preadolescents, due to their advanced maturity level and the quality and variety of their social experiences, have more sources of loneliness and social dissatisfaction in school than do the fourth graders. The tendency for stronger correlations between the two variables studied among boys than among girls is weaker and, we believe, of no practical importance.

Furthermore, the finding that a considerable percentage of children do not feel lonely and socially dissatisfied and, at the same time, perceive themselves as self-efficacious in peer interactions, agrees with our initial hypothesis. There is also a substantial percentage of children who are high in loneliness and low in self-efficacy, indicating that these children are aware of their disadvantaged position and they admit it. One might say that a child who reports being lonely and finds it hard to cope with peers is indirectly asking for help. However, this extreme group is rather small. Because admittance of such negative feelings as loneliness is always valid, we assume that there must be some important sources of loneliness--which were not examined in this study--other than social self-efficacy, for example, temperamental factors, rejection by peers, an unsupportive family, lack of siblings and so forth. Furthermore, verbal persuasive skills for nonconflict and conflict peer interactions do not cover the whole range of social skills in childhood.

The majority of lonely and socially dissatisfied children judge their social self-efficacy as average, and a large number of children who do not experience loneliness and social dissatisfaction rate their social self-efficacy as average. The latter two findings can be attributed to several causes, except from the existence of the previously mentioned sources of loneliness, such as denial as a defense mechanism, social desirability, the level of social metacognition (this explanation has already been suggested by Luftig (1987), the highly subjective character of loneliness, the existence of a close mutual friendship (Asher et al., 1990; Parker

& Asher, 1993), the attribution of social successes and failures (Bukowski & Ferber, 1987) and so forth. Of course, these are only speculations that need empirical investigation.

Our findings confirm the initial hypothesis that both loneliness and social dissatisfaction are more strongly related with low self-efficacy for the easy nonconflict situations--children are found to have a higher self-efficacy expectation for them--than with the difficult conflict ones. When the child believes that he or she will not manage well in situations where "everybody else seems to manage"--for example, to ask another child to play with him or her--and these situations concern the child's most crucial interpersonal relationships, feelings of self-devaluation, social discomfort and loneliness tend to emerge.

Although this study is correlational, we may suggest that the relation between the two variables studied is reciprocal: The child who expects that he or she can/cannot manage in easy social interactions will probably feel lonely and socially dissatisfied, and these sad feelings reinforce the low social self-efficacy expectation, a sense of worthlessness, in peer relations.

Another explanation for the relation between the two variables studied can be suggested. For example, in a recent study (Galanaki, 1994; Galanaki & Besevegis, 1996) in which we examined children's conception of loneliness and ways of coping with it, we found that children who had low self-efficacy tended to use less mature and more passive--less effective too--ways of coping with loneliness than all the other children.

Namely, low self-efficacious children reported solitary play, watching TV, seeking companionship in parents, attempt to forget loneliness, crying, and reading books more often than the children who did not have a low social self-efficacy expectation. In addition, a considerable percentage of children with low social self-efficacy gave no answer to the question about ways of overcoming loneliness. The motivation to seek companionship in peers appears less frequently in those children.

In conclusion, this study examines the relation of loneliness and social dissatisfaction in school with self-efficacy for peer interaction in the same context. There is a modest but significant negative relation between these two variables, indicating that they are related but that, at the same time, some other factors (some of them hypothesized on the basis of the existing literature and some others yet to be discovered) account for a large part of the variability of loneliness and social dissatisfaction in school. Additionally, the differentiation of levels in the two variables enabled us to examine their relation in more detail and reveals some

interesting findings, which have practical implications for the adults who work with elementary-school children.

A first practical implication of this study is the finding that there exist large individual differences concerning the degree of awareness children have about their social situation and the related feelings. We believe that children who are able to articulate their negative experiences will be more motivated to change their current status and, thus, can benefit from intervention efforts more than those who are defensive or offer socially desirable responses. The previous hypothesis (already suggested by Asher et al., 1990) is supported by the findings of this study and of the previously mentioned study on ways of coping with loneliness in relation to social self-efficacy expectation. Another practical implication is that these interactions that are commonly believed by parents and teachers to be easy (perhaps that have a positive outcome expectation), can lead to and/or reinforce feelings of loneliness and social dissatisfaction, when the child's self-efficacy belief is low. Therefore, if we can locate children with low self-efficacy beliefs for easy peer interactions, we will have located a substantial proportion of children who feel lonely and socially dissatisfied, not to mention the efforts we should make towards strengthening the "simple", "self-evident", everyday interactions of children.

When we identify children for participation in intervention programs, we should take into account information, not only from sociometric and direct observation techniques, but also from children's self-reports about their own cognitions and affects--especially the dysfunctional and unpleasant ones--which are the focus of our intervention. Only in this way, will parents, educators and mental health professionals be able to explain several otherwise incomprehensible behaviors of children, empathize with them, and take the best preventive or therapeutic action.

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