

## LONELINESS, PEER ACCEPTANCE, AND FAMILY FUNCTIONING OF CHINESE CHILDREN WITH LEARNING DISABILITIES: CHARACTERISTICS AND RELATIONSHIPS

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Although children with learning disabilities are often considered to be a heterogeneous group, they are always situated in specific social surroundings such as schools and families with which they interact dynamically in everyday life. Therefore, peer acceptance and family functioning may be related to the loneliness experienced by children with learning disabilities. This study explores the characteristics of loneliness and peer acceptance among children with learning disabilities and discusses the relationships among loneliness, peer acceptance, and family functioning. The results indicate that children with learning disabilities reported higher degrees of loneliness, but lower levels of peer acceptance; significant correlations existed between peer acceptance and loneliness, and between peer acceptance and family functioning; however, no significant correlations were found between loneliness and family functioning. © 2005 Wiley Periodicals, Inc.

Although children with learning disabilities are often regarded as a heterogeneous group, they are situated in specific social surroundings such as schools and families with which they interact dynamically every day. Therefore, some researchers consider peer acceptance and family functioning to be related to the social functioning of students with learning disabilities. This study aims to explore the characteristics of loneliness and peer acceptance among children with learning disabilities and to evaluate the relationships among loneliness, peer acceptance, and family functioning.

Research on the relationship of loneliness to learning disabilities is often associated with the construct of peer acceptance. Cassidy and Asher (1992) found that “rejected” primary-school children in Grades 3 to 6 felt much lonelier than others. A recent study (Margalit & Ben-Dov, 1995) suggested that teenagers with learning disabilities lacked social skills and were much lonelier than children without learning disabilities. Interestingly, loneliness was always associated with difficulties in peer relationships.

Several factors have been found to contribute to peer rejection, including aggressive or offensive behaviors, an introverted personality style, and poorly developed social or communication skills (Doll, 1993). Relatedly, results from a longitudinal study (Chen, Li, Xu, & Li, 1994) indicated that children with difficulties in peer relationships are more likely to encounter mental health problems and have difficulties adapting to society in adulthood. Nevertheless, most of the aforementioned research has been restricted to the study of peer relationships in school settings instead of taking into account the variable of parent–children relations or family backgrounds.

Family functioning has far-reaching and profound influences on the healthy development of children. Research has found that many children with learning disabilities come from ill-structured families with disordered management styles and excessive pressures (e.g., work schedules, money) (Bierman & Smoot, 1991; Dishion, 1990; Michaels, 1990; Toro & Weissberg, 1990); however, much of this research has been limited by the methods used to measure these constructs.

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In the present study, interviews were used to provide an in-depth analysis of the relationships between family functioning and learning-disabled children's sense of loneliness and peer acceptance. These interviews were developed using the McMaster Family Functioning Model (Yi, 1997) as a theoretical framework. This model states that the basic function of a family is to provide every family member with the conditions necessary for their physical, psychological, and social development. To accomplish these goals, a family must be able to assume the following six commitments or responsibilities: problem solving, communication, role assignment, emotional response, emotional intervention, and behavioral intervention.

Three questions were examined in this study: (a) Will the pattern of loneliness in Chinese children be comparable to that of American children reported in the literature? (b) Do children with learning disabilities in Chinese primary schools feel lonelier and have lower social status than children without learning disabilities? (c) What are the relationships among loneliness, peer acceptance, and family functioning for children with and without learning disabilities?

## METHOD

### *Participants*

Thirty-four children with learning disabilities and 64 children without learning disabilities participated in this study. They were randomly chosen from 390 students in Grades 4, 5, and 6 in a primary school in Beijing. Fifty of the participants' families were randomly selected and interviewed; 18 had children with learning disabilities, and 32 did not have children with learning disabilities.

One of the key issues in the study was to identify children with learning disabilities from those with no known learning deficits. Since no national standardized identification criteria are available in China, children with learning disabilities were identified as those whose academic achievement level was significantly lower than would be predicted by their IQ. The criteria used in this study to identify children with learning disabilities were:

1. All the participating children were assessed using the CRT Raven's Intelligence test (Zhang, H.C., & Wang, X.P., 1989; Raven, J.C. et al., 1986). Since there are no national standardized achievement tests in China, the results of the most recent final exams for Chinese literature and Mathematics courses were used as a replacement. The raw scores of the two tests were changed into standardized Z scores, and their difference was calculated using the following formula to identify children with a learning disability:

$$Z_{\text{dif}} = (Z_x - Z_y)\sqrt{(1 - r_{xx}) + (1 - r_{yy})}$$

In this formula,  $Z_x$  and  $Z_y$  refer to the standardized scores on the intelligence and academic achievement tests respectively;  $r_{xx}$  and  $r_{yy}$  stand for the tests reliability. If the value of  $Z_{\text{dif}}$  was more than  $Z_{0.10} = 1.28$ , the child was labeled as learning disabled.

2. Intellectually retarded ( $\text{IQ} < 70$ ) and gifted children ( $\text{IQ} > 130$ ) as well as those with physical deformities and mental health disorders were excluded from the sample.

### *Outcome Measurements*

1. A modified version of the *Loneliness and Social Dissatisfaction Scale* for third- to sixth-grade primary-school children (Asher, Hymel, & Renshaw, 1984) was administered to the learning disabled and nondisabled children. This scale is composed of 24 items, 16 of which assess loneliness and social dissatisfaction. There are also 8 filler items that focus on children's hobbies and other activities that were designed to help children relax while finishing the questionnaire. A factor analysis by the authors of the scale showed that all the filler items were irrelevant to the 16 loneliness items, and all of the latter loaded on a

single factor. The 16-item loneliness scale was reported to possess good internal consistency reliability (Cronbach's  $\alpha = 0.80$ ).

2. The *Peer Nomination Inventory* is composed of both positive and negative nominations. An example of a positive nomination question is: "Generally speaking, there are some classmates you like to play or study with most in your class. Please write out three classmates whom you like most. They are \_\_\_\_\_." A total of 390 students from 10 classes of Grades 4, 5, and 6 were instructed to fill out the Peer Nomination Inventory.
3. *Interview and Coding Manual for Family Functioning*. Using the McMaster Family Functioning Model Scale by Epstein, Baldwin, and Bishop (1983), a semistructured interview outline was designed. The interview was composed of directions and a number of questions in six dimensions (i.e., problem solving, communication, roles, affective responsiveness, affective involvement, behavior control) relating to family functioning. Some questions require only a "yes" or "no" answer; others are open-ended and require responses detailing "why" and "how." By analyzing each interviewee's answer, a judgment was made about each family's level of functioning. One point was given for each positive judgment, and 0 points were given for each negative one. The scores for each dimension ranged from 1 to 5, and the scores of the six dimensions were added to produce a total score for each interviewed family (One member of a family was interviewed.) The interview had good content validity; the split-half reliability coefficient was 0.70, and inter-scoring reliability was 0.74.  
The interview was conducted with the assistance of the school, who called or sent written notice to participating parents to come to the school for the interview. Each interview lasted about a half an hour and was audiotaped. Some notes were taken to record important information.
4. The Chinese version of the *Raven's Intelligence Test* (Zhang, H.C., & Wang, X.P., 1989) was administered to all 390 children; the scores of the most recent final exams of Chinese Literature and Mathematics courses were collected and taken as children's academic achievement scores. Every homeroom and subject-matter teacher as well as the mental health teacher for each class were interviewed and required to make a comprehensive assessment of each child's behavioral and academic performance and to identify the children with learning disabilities according to the LD definitions. Children were labeled as having a learning disability only if they met all the aforementioned identification criteria.
5. A *School Report* of the most recent final-exam scores of Chinese Literature and Mathematics courses was used in calculating IQ/achievement discrepancies.

## RESULTS

Using a coding manual, two postgraduate students encoded the interview records and notes. The responses on the peer-nomination inventory were scored by tallying the number of nominations each child received from all of his or her class peers. Standardized scores (Z scores) were computed for each child to facilitate further statistical analyses. Coie and Dodge's (1983) nomination techniques were then adopted to compute total popularity ("Liked-most;" LM) and unpopularity ("liked-least;" LL) scores and generate social preference (SP) and social impact (SI) scores. The social preference score was the Z score (liked most) minus the Z score (liked least) whereas the social impact score was the Z score (liked most) plus the Z score (liked least). These social preference and social impact scores were applied to classify the participating children into five social status types: popular children (SP > 1.0, LM > 0, LL < 0), rejected children (SP < -1.0, LM < 0, LL > 0), neglected children (SI < -1.0, LM < 0, LL < 0), controversial children (SI > 1.0, LM > 0, LL > 0) and average children (all the others). Statistical analysis was done with SPSS 8.0 (Weinberg, S.L., & Abramowitz, S.K., 2002).

Overall, only some of the advanced-grade primary-school children experienced a sense of loneliness. In the present study, about 10% of the children ranging from fourth to sixth grade rated themselves as lonely when responding to a majority of items (see Table 1). For example, 11% of

Table 1  
*Percentages of Fourth- to Sixth-Grader's Responses to the Items of Loneliness*

Items	Exactly true about me	True about me most of the time	Sometimes true about me	Hardly ever true about me	Not true at all about me
3. Nobody talks to me	.03	.07	.13	.18	.58
4. I am good at working with other kids at school	.55	.11	.16	.08	.09
6. I find it hard to make friends	.03	.03	.11	.07	.76
8. I have many friends	.68	.16	.10	.01	.04
9. I feel lonely	.07	.08	.17	.12	.55
10. I can find a friend when I need one	.65	.10	.10	.06	.08
12. It is hard to get kids in school to like me	.04	.07	.07	.29	.53
14. Nobody plays with me at school	.04	.01	.09	.06	.80
16. I can get along with other kids at school	.39	.23	.14	.07	.16
17. I feel left out of things at school	.04	.01	.02	.03	.90
20. I find it hard to get along with other kids at school	.06	.15	.14	.32	.33
21. I am lonely	.06	.05	.09	.11	.68
22. My classmates like me	.66	.24	.04	.03	.02
24. I have no friends	.06	.04	.13	.10	.66

the children admitted to some degree that "I am lonely," and 15% of the children admitted that "I feel lonely." Considering the responses to other items (see Table 1), about 5 to 23% of the participating children admitted, directly or indirectly, that they experienced either social or emotional loneliness. This result is consistent with the existing literature. Margalit (1994) found that at least 10 to 15% of all primary-school children report a palpable sense of loneliness. Luftig (1987) also found that 20% of the fourth-grade children and 12% of the sixth-grade children agreed with the item "I am lonely."

#### *Analysis of Factors Affecting Loneliness*

A Gender  $\times$  Grade  $\times$  LD versus non-LD ( $2 \times 3 \times 2$ ) ANOVA, with loneliness as the dependent variable, found a significant main effect for LD versus non-LD,  $F(1,97) = 6.82, p < 0.01$ . No other significant main effects or interactions were found. Post hoc analyses revealed that children with learning disabilities reported higher levels of loneliness than average children (LD group:  $M = 31.50, SD = 7.61$ ; non-LD group:  $M = 24.17, SD = 8.74$ ). This finding is supported by some existing literature (e.g. Margalit, 1994). Margalit (1994) did not report any significant differences of loneliness between gender, and children with learning disabilities did experience higher degrees of loneliness than average children.

#### *Social Status of Children with Learning Disabilities*

As described earlier, 390 participating children were classified into one of five categories (popular, rejected, neglected, controversial, and average) using the nomination techniques of Coie and Dodge (1983). Table 2 lists the percentage of children with and without a learning disability across categories. Using the social popularity (SP) scores to measure peer acceptance, learning disabled children were found to be less acceptable than average children,  $t = 2.18, p = 0.006$ . This is not unexpected since previous research has found that learning disabled children are frequently rejected by average children and even by other learning disabled children, in competitive situations (Margalit & Ben-Dov, 1995).

Table 2  
*Percentage Discrepancy Between Not Learning-Disabled and Learning-Disabled Children*

Type	Popular	Rejected	Neglected	Controversial	Average
Not learning disabled	26.16	18.00	16.01	1.97	40.00
Learning disabled	5.88	50.00	14.71	5.88	23.53
One-tailed Z test	2.44**	4.37**	0.20	1.45	1.89*

\* $p < 0.05$ . \*\* $p < 0.01$ .

The correlations among loneliness, peer acceptance, and family functioning appear in Table 3. Peer acceptance was found to be significantly and negatively correlated with loneliness. On the contrary, family functioning and peer acceptance were significantly and positively correlated. However, the correlations between family functioning and loneliness were not significant. The hypothesis that significant negative correlations exist between peer acceptance and loneliness has been supported by previous research (Cassidy & Asher, 1992; Margalit, & Ben-Dov, 1995).

The assumption that children from healthy functioning families are more likely to be accepted by peers is consistent with some existing literature (Bierman, & Smoot, 1991; Michaels, 1990). But the question of why family functioning is not significantly and negatively correlated with loneliness has not yet been answered.

#### DISCUSSION

The objective of this study was to explore the characteristics of loneliness, peer acceptance, and family functioning among children with and without learning disabilities. The results suggest that when compared with children who are not learning disabled, children with learning disabilities report higher degrees of loneliness and lower levels of peer acceptance. Possibly because of behavioral problems and insufficient levels of social competence, learning disabled children are more likely to be rejected by their peers. When the participating children were instructed to fill out the peer-nomination inventory, we asked them to list the reasons why some children were disliked. Relevant research findings (Doll, 1993; Margalit & Ben-Dov, 1995) suggested that the reasons can be classified into four categories: aggressive behavior (destructive tendencies, physical attacks, verbal or emotional offenses, etc.), personality traits (depressiveness, anxiety etc.), lack of social competence (e.g., in communication skills, problem-solving abilities, social responsibilities, positive attitude toward social activities, etc.), and poor academic and cognitive competence. The most frequently listed reason was aggressive behaviors while poor academic or cognitive competence was the reason mentioned least frequently. Cillessen, van Ijzendoorn, and van Lieshout (1992)

Table 3  
*Correlations Among Loneliness, Peer Acceptance, and Family Functioning*

	Sense of Loneliness ( $n = 98$ )	Peer Acceptance ( $n = 98$ )	Family Functioning ( $n = 50$ )
Sense of loneliness	1.00		
Peer acceptance	-0.43**	1.00	
Family functioning	-0.20	0.33*	1.00

\* $p < 0.05$ . \*\* $p < 0.01$ .

claimed that 48% of rejected children had aggressive, impulsive, or destructive tendencies while 13% tended to be shy, sensitive, and inhibited. Children with learning disabilities also have been observed to share some common characteristics with other classifications of peer-rejected children such as poor adjustment, anxiety, aggressiveness, and the tendency to violate rules and juvenile delinquency (Yu, 1997). Due to their behavioral problems and social incompetence, children with learning disabilities are often isolated or rejected, which results in a stronger sense of loneliness. Conversely, good peer relationships make children feel less lonely because their relationships provide social support and a sense of security. Therefore, peer acceptance is obviously highly correlated to loneliness. Moreover, learning disabled children's excessive sensitivity and poor self-concept may raise their threshold for feelings of loneliness. The latter, combined with social skills that are inadequately developed to deal with loneliness, may lead learning disabled children to feel the experience of loneliness more deeply than children who are not learning disabled.

Although many factors are related to low levels of peer acceptance and a strong sense of loneliness among children with learning disabilities, the cause may be related more to behavioral problems and lower levels of social competencies than to their poor academic and cognitive skills. This reminds us that our educational programs for children with learning disabilities should not only help them improve their academic or cognitive achievement but also their social and behavioral deficiencies.

The interrelationships among loneliness, peer acceptance, and family functioning can be better explained by the model in Figure 1. It is through children's social competence and behavior, an intermediate variable, that family functioning and peer acceptance are linked with each other. The basic function of the family is to provide every family member with a healthy environment for his or her physical, psychological, and social development. For children, favorable family functioning will contribute to the acquisition of various social abilities and skills and help them form good behavioral habits (Yi, 1997). Children with good social competencies and behavior are more likely to enjoy higher social status and feel less lonely. Additionally, good peer relationships can help children develop their social competencies even further (Zou, 1998). Since children are important members of a family, their social competencies can exert a significant influence on parent–children relations as well as the successful achievement of family functioning. Yu (1998) found that interactions did exist between family resources and social development of children with learning disabilities; hence, family functioning serves as one of the important factors of peer relationships.

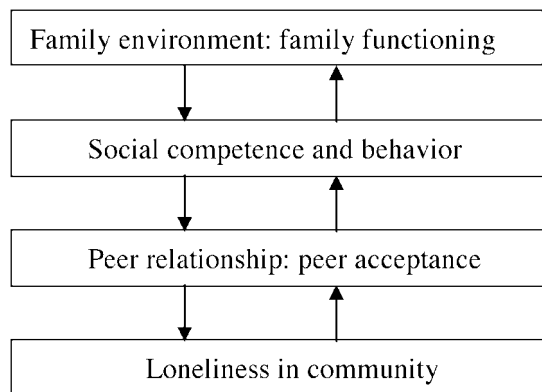


FIGURE 1. Hypothesized model of relations among loneliness, peer acceptance, and family functioning.

The reason why the correlations between family functioning and loneliness are not significant might lie in the limitations of the loneliness and social dissatisfaction questionnaire adopted in this study since the items are mainly designed to reflect degrees of social dissatisfaction and feelings of loneliness among peers in school settings. Future studies should examine mediator variables that would help explain the relationship between family functioning and loneliness.

#### NOTE

Professor Guoliang Yu mentors Ph.D. candidates at the Institute of Psychology, Chinese Academy of Sciences.

#### REFERENCES

- Asher, S., Hymel, S., & Renshaw, P. (1984). Loneliness in children. *Child Development*, 55, 1456–1464.
- Bierman, K.L., & Smoot, D.L. (1991). Linking family characteristics with poor relations: The mediating role of conduct problems. *Journal of Abnormal Child Psychology*, 19, 341–355.
- Cassidy, J., & Asher, S.R. (1992). Loneliness and peer relations in young children. *Child Development*, 63, 350–365.
- Chen, X., Li, Z., Xu, L., & Li, B. (1994). Peer relations: An examination of sociometric status and socio-emotional characteristics. *Psychological Science*, 17, 198–204.
- Cillessen, A.H.N., van Ijzendoorn, H.W., & van Lieshout, C.F.M. (1992). Heterogeneity among peer-rejected boys: Subtypes and stability. *Child Development*, 63, 893–905.
- Coie, J.D., & Dodge, K.A. (1983). Continuities and changes in children's social status: A five year's longitudinal study. *Merrill-Palmer Quarterly*, 29, 261–282.
- Dishion, T.J. (1990). The family ecology of boys' peer relations in middle childhood. *Child Development*, 61, 874–892.
- Doll, B. (1993). Evaluating parental concerns about children's friendships. *Journal of School Psychology*, 31, 431–447.
- Epstein, N.B., Baldwin, L., & Bishop, D.S. (1983). The McMaster family assessment device. *Journal of Marital and Family Therapy*, 9, 111–180.
- Luftig, R.L. (1987). Children's loneliness, perceived ease in making friends and estimated social adequacy: Development and social metacognition. *Child Study Journal*, 17, 35–53.
- Margalit, M. (1994). Loneliness among children with special needs. New York: Springer-Verlag.
- Margalit, M., & Ben-Dov, I. (1995). Learning disabilities and social environments: Kibbutz versus city comparisons of loneliness and social competence. *Journal of Behavioral Development*, 18, 519–563.
- Michaels, C.R. (1990). Psychological adjustment and family functioning of boys with learning disabilities. *Journal of Learning Disabilities*, 23, 446–450.
- Raven, J.C., Court, J.H., & Raven, J. (1986). Manual for Raven's Progressive Matrices and Vocabulary Scales. General Overview. London: H.K. Lewis & Co. Ltd.
- Toro, P.A., & Weissberg, R.P. (1990). A comparison of children with and without learning disabilities on social problem-solving skill, school behavior, and family background. *Journal of Learning Disabilities*, 23, 115–120.
- Weinberg, S.L., & Abramowitz, S.K. (2002). *Data analysis for behavioral sciences using SPSS*. Cambridge, U.K.: Cambridge University Press.
- Yi, J. (1997). Theories of family in psychological counseling and therapy. *Advances in Psychological Science*, 6, 37–42.
- Yu, G. (1997). The causal-effectual relationship between social development and family resources in learning disabled children. *Psychological Science*, 20, 31–35.
- Yu, G. (1998). The characteristics of social development among children with learning disabilities. *Psychological Development and Education*, 14, 40–46.
- Zhang, H.C., & Wang, X.P. (1989). Standardization research on Raven's Standard Progressive Matrices in China. *Acta Psychologica Sinica*, 2, 113–120.
- Zou, H. (1998). Functioning and factors of peer relationships. *Psychological Development and Education*, 14, 40–46.