ABSTRACT

Title of thesis: PERCEIVED SOCIAL SUPPORT IN THE CLASSROOM

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Second and third grade children's perceptions of available classroom peer social support and peer acceptance were investigated using sociometric nomination and rating procedures. Nomination items included giving, receiving, seeking, and friendship support. Reciprocal nominations were investigated by exploring matches between nominator and nominee for friendship or support, and expected reciprocity was investigated in terms of consistency of children's nominations across items. The relationship between peer acceptance, expected reciprocity, and reciprocity in social support were also examined.

Results revealed that boys and girls rated their own gender higher in peer acceptance, and girl's ratings of girls increased across the school year. No gender differences were found in expectations for support or in reciprocal nominations for support. For all, the number of reciprocal nominations for support increased across the school year. Peer acceptance was related more to reciprocal nominations for support as opposed to expectations for support. Directions for future research are discussed.

PERCEIVED AVAILABLE SOCIAL SUPPORT IN THE CLASSROOM

by

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Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park in partial fulfillment
of the requirements for the degree of
Master of Arts
2005

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DEDICATION

This work is dedicated to the Lord Jesus Christ by whom all things are made possible, and to the children who participated in this project and who allowed a brief glimpse into the social world of the elementary school classroom.

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Chapter 1

Introduction

According to Sarason, Sarason, and Pierce (1990a), research interest in the construct of social support began after Cassel (1976) and Cobb (1976) published papers in the medical literature that emphasized the buffering effects of the social environment on stress. Cobb, who investigated social support as a means of moderating stressful life events, provided one of the earliest definitions of social support. In his conceptualization, social support is viewed as information leading to the feeling of being cared for, the belief that one is loved, esteemed, and valued, and the sense of belonging to a reciprocal social network.

As pointed out by Sarason et al. (1990a), social support can have many different meanings, as it is not a unitary concept. Therefore, subsequent research studies in social support made apparent the need for clear definitions and well-constructed theories. In fact, the successful development of adequate measures of social support has suffered due to the lack of clear definitions of the construct (Nolten, 1994). In an attempt to address these concerns, Tardy (1985) proposed a comprehensive and multidimensional model of social support.

According to Tardy (1985), social support may be conceptualized in terms of direction (i.e. given or received), disposition (i.e. available or actually utilized), description and evaluation (where description refers to qualitative aspects of support and evaluation refers to satisfaction with support), content (i.e. type of support), and network, which addresses the specific individuals who either give or receive support (e.g. family or friends). With respect to content, Tardy drew upon work by House (1981) to

conceptualize four types of support including emotional, instrumental, informational, and appraisal support (i.e. evaluative feedback).

Perhaps one of the most interesting findings in social support research concerns the area that Tardy conceptualized as disposition. Specifically, research that compared reports of support actually given by network providers with reports of support received by network recipients found discrepancies between the two (Antonucci & Israel, 1986). In other words, perceptions of support did not always match support actually given. Furthermore, researchers have consistently found that the stress buffering effect of social support is more closely linked to the perception that support is available, rather than to support actually received (Antonucci & Israel, 1986; Wethington & Kessler, 1988). According to Wethington and Kessler (1988), perceived social support is the notion that others will be available if needed. As noted by Krause (2001), actual support may be viewed by some as an indication of personal failure. Perceived or anticipated support on the other hand, may function as a "social safety net" that encourages risk-taking and personal problem-solving (Wethington & Kessler, 1988), which in turn fosters feelings of self-efficacy and competence.

Explanations for the greater importance of perceived social support as opposed to actual support on outcomes have generally centered on the process of cognitive appraisal (Sarason et al., 1990a). For example, rather than specific characteristics of a stressful event, researchers found that the personal experience of stress was based on one's appraisal of the degree of a situation's threat, and the resources available to deal with it, personal and otherwise (Lazarus & Launier, 1978). Though researchers have yet to fully explain the relationship between actual and perceived support on stress, Sarason, Sarason,

and Pierce (1990b) propose that it may be that perceived social support moderates the effect of actual support on outcome measures.

Statement of the Problem

Most investigations of perceived support have involved adult populations resulting in several published adult measures of social support. However, several investigations have documented the importance of perceived social support for children's and adolescent's adjustment and well-being. Social support may act as a protective factor for children by preventing the occurrence of stressful events, moderating the negative effects of stress on psychological adjustment variables, and by directly strengthening psychological adjustment variables (Sandler, Miller, Short, & Wolchick, 1989). Sandler et al. propose that in return, children may benefit from enhanced self-esteem, increased perceptions of control, and enhanced perceptions of the security of social relationships which act as intervening variables to children's psychological adjustment.

Children and adolescents with high levels of perceived actual or available social support have been found to have fewer adjustment problems (Hirsch, 1985). Also, higher levels of perceived actual or available social support have been linked to more positive outcomes for various populations of children including children of divorce and children with learning disabilities (Cowen, Pedro-Carroll, & Alpert-Gillis, 1990; Wenz-Gross & Siperstein, 1997). On the other hand, low perceptions of social support have been found to be a risk factor in a number of areas including peer bullying and victimization (e.g. Furlong, Chung, Bates, & Morrison, 1995). Those with low perceptions of actual or available support may lack positive alternatives for solving problems or conflicts than those with high perceptions of actual or available support (Malecki & Demaray, 2003).

Though the above-cited research demonstrates the importance of documenting children's perceptions of social support, there are very few published measures of perceived social support for children. Most measures for children have been designed to investigate children's perceptions of support received across a variety of contexts. As such, there are no published measures of perceived social support for children within the context of the classroom.

The findings from several studies also highlight the importance of exploring gender differences in children's perceptions of social support. For instance, Furlong, Chung, Bates, and Morrison (1995) found that children who experienced multiple types of violence reported having fewer options for seeking teacher or peer support, and also experienced low levels of interpersonal trust in school relationships. These children were more likely to be male, and also less likely than non-victims to report having friends. Malecki and Demaray (2003) found significant differences in perceptions of actual social support between middle school students who reported bringing a weapon to school and those who did not. Those who reported carrying a weapon to school, who were also more likely to be male, reported lower levels of overall total actual support from all sources.

Although it is likely that environmental influences on the structure of social roles may play a part (Wills, 1990), individual factors may also affect perceptions of social support including personality, cognitive style, social history, and social competence (East, Hess, & Lerner, 1987; Sarason et al., 1990b). Peer acceptance for children, particularly as an indicator of social competence, has been investigated widely. In general, children rated sociometrically as popular appear to possess skills in establishing positive peer relationships while neglected children have been found to engage in much

less social interaction (Rubin et al., 1999). As with social support, differences in outcome have been found for boys and girls relative to the level of peer acceptance. For example, Kupersmidt and Patterson (1991) found that in comparison to boys, neglected fourth-grade girls were found to be at an increased risk for depression when follow-up occurred two years later.

As will be discussed in the review of literature, only one study was found that directly investigated the relationship between peer acceptance and perceived social support. In this particular study conducted by East, Hess, and Lerner (1987), those rated low in peer acceptance perceived much less available social support from peers than those rated high in peer acceptance. The researchers suggested that limitations in rejected students' social skills might have impeded these children from receiving social support from peers. According to Hazler (2000), the absence of friendly peers may leave the individual in a state of isolation without important avenues for social support. Additional research is needed to clarify the relationship between children's perceptions of social support and peer acceptance as well as to explore differences in these constructs by gender. Finally, very few studies have examined either peer acceptance or children's perceptions of social support over time. As a result, very little is known about the stability of these constructs, and additionally whether there are differences in stability according to gender.

Purpose of the Study

The purpose of this study is to extend the research base in several ways: First, by making a clear distinction between perceived actual and perceived available support and second, by investigating the relationship between peer acceptance and children's

perceptions of available classroom peer social support in a sample of second and third grade students. This study differs from the study conducted by East, Hess, and Lerner described previously, in a number of areas. Specifically, peer acceptance is measured in the current study using a roster and rating procedure where children rated each classmate on a scale of "liking". This procedure allows an overall level of acceptance to be calculated for every child. In contrast, East et al. used a limited choice procedure where children nominated a boy and then a girl who best characterized certain positive and negative attributes. In addition, East et al. combined scores from both classmates and close friends to create an overall peer social support score while the current study involves a measure of children's perceptions of support solely within the classroom context. Also, perceived social support is measured in the current study using a sociometric nomination procedure (described next), while East et al. utilized Harter's Social Support Scale for Children (1985a), a self-report measure which asks children to indicate agreement among statements measuring emotional support from various sources.

As will be discussed in the literature review, studies investigating social support in younger children have generally relied on interview, dialogue, or questionnaire formats (e.g. Frankel, 1990; Wenz-Gross & Siperstein, 1997). However, the current study is distinct in its use of a sociometric nomination procedure where children identified an unlimited number of classmates on items measuring perceptions of both the receipt and provision of available social support in the classroom. The measure was administered during individual interviews conducted at both the beginning and end of the school year where children were engaged in activities concerning their friendships with others in the classroom. The nomination items were created as part of the current study to measure

children's perceptions of available classroom peer support along four dimensions including giving support, receiving support, seeking support, and friendship. Measuring both perceived giving support and perceived receiving support allows for the calculation of consistency in nominations across items for the same child, as well as reciprocity across items for each child and his or her classroom peers. Therefore, children's perceptions of available social support were analyzed in terms of "expected" and "actual" reciprocity in the provision and receipt of support.

The measure addresses several components of Tardy's model of social support (1985). In terms of direction, comparisons were made of nominations given and received. As one aspect of disposition, perceptions of available support were investigated based on comparisons involving nominations given and those reciprocated by others. With respect to content, social support items were created to examine general social and emotional aspects of support, while the specific social network members were specified as elementary school classroom peers. The study also investigated the relationship between expected reciprocity and reciprocity in available social support, the stability of patterns across the school year, and gender differences. It is expected that patterns of stability and reciprocity of perceived available classroom peer support will be linked to measures of peer acceptance. A summary of the goals of the study and research questions is described next.

Summary of Study Goals and Research Questions

The primary purpose of this study is to investigate the relationship between peer acceptance and children's perceptions of available classroom peer social support using sociometric rating and nomination procedures. Nomination items were created to

measure children's perceptions of available classroom peer support along four dimensions including giving support, receiving support, seeking support, and friendship. The study investigates expected reciprocity between giving and receiving support, giving and seeking support, and giving support and friendship by comparing consistency in nominations across different items for the same child. Reciprocity in giving support, receiving support, seeking support, and friendship is investigated by examining the match across items measuring these dimensions of available support for each child and nominated peers. The relationship between peer acceptance and all social support variables are examined in a correlational analysis. In addition, gender differences and the stability of all variables across the school year are explored. This study is designed to address the following research questions:

Peer Acceptance

Do boys or girls receive higher or lower ratings of peer acceptance? Do boys or girls receive higher or lower ratings of peer acceptance from same or opposite gender peers? Are the variables (combined gender ratings, ratings by boys, and ratings by girls) stable across the school year?

Expected Reciprocity Between Giving Support and Receiving Support

Do boys or girls say they would help the same children whom they believe would try to help them? Are the variables (number and proportion of consistent nominations) stable across the school year?

Expected Reciprocity Between Giving Support and Seeking Support

Do boys or girls say they would help the same children from whom they would seek help? Are the variables (number and proportion of consistent nominations) stable

across the school year?

Expected Reciprocity Between Giving Support and Friendship

Do boys or girls say they would help the same children whom they consider friends? Are the variables (number and proportion of consistent nominations) stable across the school year?

Reciprocity in Giving Support

Do boys or girls say they would help those who say they would help them? Are the variables (number and proportion of reciprocal nominations) stable across the school year?

Reciprocity in Receiving Support

Do boys or girls say they receive support from those who say they receive support from them? Are the variables (number and proportion of reciprocal nominations) stable across the school year?

Reciprocity in Seeking Support

Do boys or girls say they seek support from those who would seek support from them? Are the variables (number and proportion of reciprocal nominations) stable across the school year?

Reciprocity in Friendship

Are boys or girls considered friends by those whom they consider friends? Are the variables (number and proportion of reciprocal nominations) stable across the school year?

Relationship Between Peer Acceptance and Expected Reciprocity in Perceived Social Support

For boys and girls, is peer acceptance related to expected reciprocity between giving support and receiving support, expected reciprocity between giving support and seeking support, and expected reciprocity between giving support and friendship?

Relationship Between Peer Acceptance and Reciprocity in Perceived Social Support

For boys and girls, is peer acceptance related to reciprocity in giving support, reciprocity in receiving support, reciprocity in seeking support, and reciprocity in friendship?

Chapter 2

Review of Prior Research

Overview

The following review of prior research examines three areas central to understanding perceived social support and peer acceptance in children. First, an analysis is provided of existing published measures of perceived social support in children. Treatment of perceived social support will distinguish between perceived available support and perceived actual support. Second, a review is provided of research in perceived social support as a risk and protective variable for children and adolescents. Finally, studies in peer acceptance are reviewed to clarify the conceptual relationship between peer acceptance and perceived social support in children.

Measuring Social Support in Childhood and Adolescence

As mentioned previously, very few published measures of social support have been designed for children. Most studies on children's support networks have been conducted with adolescents, in part due to the relative ease of constructing measures for older populations (Cauce, Reid, Landesman, & Gonzales, 1990). Social support for younger children has typically been assessed using interview, dialogue, or self-report questionnaire formats (e.g. Frankel, 1990; Wenz-Gross & Siperstein, 1997). One major difficulty in reviewing children's measures of perceived social support is that measures typically have not distinguished measurement of perceptions of *actual* support from the perception of *available* support. As such, the item wording of the measures was reviewed to determine which aspect of support was being measured. Measures were classified as assessing perceptions of actual support if the items primarily measured how often support

is provided. In contrast, measures were classified as assessing perceptions of available support if items primarily measured whether support is available. (See Table 1 for a list of measures and classification of item measurement).

Until more recently, the Social Support Scale for Children (SSSC; Harter, 1985a) was the only published scale in existence for children. The SSSC is designed for elementary and middle school children in grades 3-8. This instrument is made up of four subscales that measure perceived available social support in the form of positive regard from parents, teachers, classmates, and friends. Each subscale is composed of 6 items that measure several dimensions of emotional support provided by each respective source. Using a sample of predominantly Caucasian participants from lower to upper middle class neighborhoods, Harter was able to establish acceptable internal consistency for the SSSC. Based on Cronbach's alpha, internal consistency reliabilities for the parent and teacher subscales were found to be between .78 and .88 while those for the classmate and friend subscales were found to be between .72 and .83. In addition, an oblique factor rotation was used to determine the factor structure of the SSSC.

In elementary school samples, a three-factor structure emerged including parent and teacher as two of the factors, while the classmate and friend subscales combined to form the third factor. However, in middle school samples, all four factors were evident including parent, teacher, classmate, and friend. In addition to face validity, Harter was able to establish concurrent validity based on moderate and significant correlations between the four subscales of the SSSC and Harter's Self-Perception Profile for Children (SPPC; Harter, 1985b). The four subscales of the SSSC were found to correlate between .28 to .49 with the global self-worth scale of the SPPC indicating a positive link between

Table 1: Published Measures of Social Support for Children and Adolescents - Classification of Item Measurement into Perceived Available or Perceived Actual Support

Measure	Support Type	Sample Item	Classification
Social Support Scale for Children (Harter, 1985a)	Emotional	"Some kids have a close friend who really understands them but other kids don't have a friend who understands them." (Child selects which is "really true for me" or "sort of true for me")	Perceived Available Support
Child and Adolescent Social Support Scale (Malecki et al., 1999)	Emotional Informational Appraisal Instrumental	"My friend gives me advice" (Child rates item on frequency and importance)	Perceived Actual Support
Student Social Support Scale (Nolten, 1994)	Emotional Informational Appraisal Instrumental	"My teacher makes it okay to ask questions" (Child rates item on frequency and importance).	Perceived Actual Support
Perceived Social Support from Family and Friends Scale (Procidano & Heller, 1983)	Emotional	"My friends are good at helping me solve problems" (Child selects between "yes", "no", and "don't know").	Perceived Available Support
My Family and Friends (Reid et al., 1999)	Emotional Informational Instrumental Companionship	"When you want to share your feelings which person do you go to most often? (Child places a name card on ranking board and rates satisfaction of support using a barometer prop.)	Perceived Actual Support

perceptions of available social support and appraisals of the self.

There are several limitations of Harter's SSSC. Reliable measurement of perceived social support in more diverse samples of children has not been established. In addition, the SSSC is formatted to have children read two statements and then decide which statement is most like them. Children are then asked to decide if the statement is "really true" or "sort of true" for them. Though the purpose of this procedure is to reduce social desirability, some have described this format as confusing and awkward (i.e. Malecki & Demaray, 2002).

Using an interview dialogue format, Reid, Landesman, and Treder (1989) developed "My Family and Friends" as a way to measure children's subjective impressions about actual social support. The measure includes props such as cards with names, drawings or photographs of all individuals in the child's social network, a wooden ranking board into which cards are inserted, and a large cutout barometer with labels and a moving level indicator. In a ranking task, the child uses the cards and the ranking board to indicate the order in which he or she goes to each person for a given type of support. The barometer is used to express relative levels of satisfaction with the type of support received. Specific interview dialogues are used that focus on various aspects of support including emotional, informational, instrumental, companionship, and conflict.

Reid et al. (1989) investigated the psychometric properties of "My Family and Friends" with a sample of 249 participants, ages 6-12. Approximately 43% of the sample were boys, 57% were girls. The majority of the sample (82%) was Caucasian and 18% were African American. In addition, 50% were from single-parent families headed by

mothers, 50% were from two-parent families. Families were part of the University of Washington Family Behavior Study such that children's scores on the Peabody Picture Vocabulary Test and WISC-R were available. Internal consistency reliability for the four areas of social support (emotional, informational, instrumental, companionship) ranged from .28 to .92 with an overall mean of.72. Also, children's reports of their perceptions of actual social support had acceptable test-retest reliability and alpha coefficients. Intraclass correlation coefficients for rankings and ratings revealed a median test-retest reliability of .68 for rankings and .69 for ratings.

One interesting finding in this study is that a small portion of children was highly variable in their reported perceptions of social support. Though there were no differences in these children with respect to age, sex, or intelligence scores, a review of examiners' notes revealed that 85% of these children were from families described as experiencing stress or upheaval. One limitation illustrated by these findings is that children's reports of actual social support may be extremely variable in stressful family situations. Also, as the study used a sample of non-immigrant families from middle to upper middle class neighborhoods, the results cannot be generalized to other populations.

Procidano and Heller (1983) developed a measure to tap perceptions of available emotional support from family and from friends. Three studies were conducted to provide evidence of concurrent and predictive validity for the measure resulting in the Perceived Social Support – Family and Friends (PSS-Fa, PSS-Fr). The instrument was designed to measure the extent to which an individual perceives that family and friends are available to provide needed support, information, and feedback, and consists of 20 items each for family and friends with three possible responses: yes, no, don't know. A

total of 222 undergraduate students with a mean age of 19 participated in the validation studies. Students completed the PSS-Fa and PSS-Fr along with multiple inventories measuring distress, social competence, and psychopathology.

Internal consistency was found to be .95 for PSS-Fa both at time 1 and time 2. For the PSS-Fr, internal consistency was found to be .87 at time 1 and .90 at time 2. Also, scores on both the PSS-Fr and PSS-Fa were significantly and negatively related to psychopathology. One obvious limitation of this measure with respect to use for younger populations is that the validation sample consisted exclusively of undergraduate college students. In addition, information was not available with respect to gender and ethnicity of the sample. Though this measure has been used with adolescent populations, it is not known whether the psychometric properties hold for younger children.

In order to address limitations in the measurement of perceived social support in children, the Student Social Support Scale was developed by Nolten (SSSS; 1994). This is a 60-item scale designed to measure children's perceptions of positive attitudes and behaviors from significant others. Based on the work of Tardy (1985) described previously, the SSSS measures emotional, appraisal, informational, and instrumental perceived actual social support from parents, teachers, classmates, and a close friend. Using a Likert-type scale, children are asked to rate items on frequency and importance. Nolten established reliability and validity of the SSSS using a sample of 298 children in grades 3-8. Participants included children from schools located in Wisconsin, Massachusetts, and Washington, D.C. Approximately 75% of the sample was Caucasian, 10% African American, 3% Hispanic, 4% Asian, and 4% Native American.

Based on Cronbach's alpha, internal consistency for the total scale of the SSSS was found to be .97 while coefficient alphas for the subscales ranged from .92 to .95. The SSSS was also found to be extremely reliable over a four-month period. For the full scale, test-retest reliability was found to be .75 while subscale reliabilities ranged from .63 to .74. As well, factor analyses of the SSSS revealed four factors including parent, teacher, classmate, and close friend. Finally, convergent validity of the SSSS was established between the SSSS and Harter's Social Support Scale for Children (SSSC; 1985a) based on significant moderate to strong correlations between the scales. Correlations ranged from .50 to .67 for each subscale of the SSSS and each corresponding subscale of the SSSC (i.e. parent, teacher, classmate, and close friend). Though the SSSS has been found to demonstrate strong properties of reliability and validity, several limitations have been noted. For example, the SSSS has been described as lengthy and time consuming as the scale takes approximately 25 minutes to administer (Malecki & Demaray, 2002). Additionally, Nolten recommended additional studies utilizing larger, more representative samples in terms of ethnicity and grade level to establish further validity of this scale.

This initial version of Nolten's scale was unpublished. However, a subsequent investigation sought to further investigate the reliability and validity of the SSSS that in turn, led to a revision and publication of a new scale (i.e. The Child and Adolescent Social Support Scale, CASSS; Malecki et al., 1999). Malecki and Elliott (1999) sought to investigate the reliability and validity of the Student Social Support Scale (SSSS; Nolten, 1994) in the measurement of perceived actual social support for adolescents. The study included a gender-balanced sample of 198 children in grades 7 through 12 enrolled

in one rural and one large urban school district in Western Illinois. Approximately 87% of the sample was Caucasian while 13% of the sample was minority. Though the SSSS was designed for students in grades 3-8, the authors found the SSSS to be highly reliable with an older, adolescent sample. Internal consistency for all items of the SSSS was .96 while subscale reliabilities ranged from .92 to .95. Subscale alphas for both males and females ranged from .88 to .96. In addition, using a subsample, test-retest reliability correlations were .55 on the total scale while correlations for subscales ranged from .28 to .80. Finally, results of factor analyses provided strong support for a four-factor scale consisting of parent, teacher, classmate, and close friend as sources of support.

Concurrent validity of the SSSS was investigated using measures of social skills, self-concept, and academic performance. In addition to the SSSS, students in this investigation completed the student form of the Social Skills Rating System (SSRS; Gresham & Elliott, 1990) and the Student Self-Concept Scale (SSCS; Gresham, Elliott, & Evans-Fernandez, 1993). Academic performance was measured by assessing each student's grade point average in his or her core classes. Analyses of the data indicated small but significant correlations between perceived actual social support and grade point average. Concurrent validity of the SSSS was established with moderate and significant correlations with the SSRS ranging from .46 to .59 on the parent, teacher, classmate, and close friend subscale. These results suggest that self-ratings of adolescents' social skills are related to their perceptions of actual social support. As explained by the authors, those with better social skills may be more adept at acquiring social support from others (Malecki & Elliott, 1999). Also, correlations between the SSSS and the SSCS were moderate to high and significant, revealing a similar relationship between adolescents'

self-ratings of self-concept and their perceptions of actual social support. In other words, greater perceived actual social support is related to greater self-confidence.

Malecki and Elliott also sought to investigate the sensitivity of the SSSS in measuring gender, age, and ethnic differences in perceived actual social support. Some evidence of gender and age differences emerged. Specifically, the total score of perceived actual social support was significantly higher for females than for males. Also, female students reported significantly higher levels of actual social support than males from classmates and close friends. ANOVA results indicated statistically significant differences among grade levels on perceived actual total support, parent support, teacher support, and classmate support. Actual social support as reported by younger adolescents in 7^{th} and 8^{th} grade was significantly higher than for older adolescents in 11^{th} and 12^{th} grade. Finally, results from this study revealed no significant differences between minority students' and Caucasian students' ratings of perceived actual social support. This last finding should be interpreted with caution however, as the study sample consisted of a small percentage of minority students. The authors also noted the limitation of the study sample with respect to handicapped status, as this information was not included.

The SSSS (Nolten, 1994) was revised and refined to create the Child and Adolescent Student Social Support Scale (CASSS; Malecki et al., 1999). The original 60 items of the SSSS were reduced to a total of 40 self-report items to measure perceived social support from parents, teachers, classmates, and friends. The CASSS retained the structure of the original scale with respect to measuring the frequency and importance of support. In addition, the CASSS was created in two versions: Level 1 of the scale was

created to measure perceived actual social support in children from grades 3-6, while Level 2 was created to measure perceived actual social support in children from grades 6-12. Each level contains a total of 40 items with considerable overlap between levels in item content and structure.

Evidence of reliability and validity of the CASSS was provided in a study by Malecki and Demaray (2002). This study utilized a gender-balanced sample of 1110 students in grades 3-12 from schools in Massachusetts, Wisconsin, Minnesota, Illinois, and Nebraska. A total of 353 students were from elementary schools and 757 from middle or high schools. Caucasian students made up 62% of the sample while 38% were minority. In addition, 13% of study participants had identified disabilities, though disability information was unavailable for approximately half of the study sample. For Level 1, internal consistency reliability was .94 for the total scale and ranged from .87 to .93 on the subscales. For Level 2, internal consistency reliability was .95 for the total scale while subscale reliabilities ranged from .89 to .94. Confirmatory factor analysis also supported the presence of four factors including parent, teacher, classmate, and close friend.

Construct validity was provided by significant and moderate correlations ranging from .55 to .66 between the subscales of the Level 2 version of the CASSS and Harter's Social Support Scale for Children (SSSC; Harter, 1985a). Also, significant moderate correlations were found between both Level 1 and Level 2 of the CASSS from all sources and the student version of the SSRS (Gresham & Elliott, 1990), as well as with the SSCS (Gresham et al., 1993). These results demonstrate concurrent validity with the constructs of social skills and self-concept respectively. Finally, significant, negative, moderate

correlations were demonstrated between Level 1 of the CASSS and indices of problem behaviors as measured by the Behavior Assessment Scale for Children (BASC; Reynolds & Kamphaus, 1998).

As with the SSSS (Nolten, 1994), the CASSS demonstrated gender and age differences in perceptions of actual social support. Girls of all ages perceived more overall actual support than males. Age differences were also apparent as total perceived actual social support decreased as grade level increased. Finally, differences emerged between minority and Caucasian students' perceptions of actual social support. Specifically, younger minority students in elementary school perceived more actual support from teachers than Caucasian students. Middle and high school minority students on the other hand, perceived less overall actual support than Caucasian students.

In summary, the majority of published measures reviewed have adequately specified the type of support measured and the network providers of support. All measures included multiple sources of support such as parents, teachers, and friends, though all primarily measure emotional and social support. Overall, the children's measures of social support reviewed demonstrate acceptable psychometric properties in measuring children's perceptions of the receipt of social support. Specifically, all measures have reported relatively strong internal consistency levels for the total scales and subscales. However, test-retest reliability was only established for Nolten's Student Social Support Scale and the ranking and rating procedure of My Family and Friends. In addition, the bulk of measures have established factors by network providers of support. Finally, most measures have established concurrent validity of perceived social support and "perceived social ability" such as self-competence and social skills, and also with

measures of self-appraisal (i.e. self-concept and self-worth).

The measures reviewed do not clearly specify whether it is perceptions of actual support or perceptions of available support that is being measured. As stated earlier, it was necessary to review the wording of items in order to make an initial determination as to whether the measure provided an assessment of perceived actual support or perceived available support. For example, measures by Nolten (1994) and Malecki et al. (1999) have used both frequency (i.e. actual support) and the importance of support as ways to gauge children's perceptions. In contrast, both the Social Support Scale for Children and the Perceived Social Support from Family and Friends scales primarily ask children to indicate agreement among statements that only tap the availability of support by a network member. Finally, the My Family and Friends Measure uses a much different format where children use a ranking procedure to indicate which network member provides the most "actual" support, and a barometer prop to rate the satisfaction of support received.

Though the measures reviewed provide adequate measurement of general perceptions of received social support, these instruments do not measure several other important aspects of children's social networks. For instance, none of the measures include an assessment of children's perceptions of providing support to others. Similarly, none of the measures includes assessment of the accuracy of children's perceptions. This information may be very helpful in more fully understanding the variables that may contribute to both low levels of perceived social support and low levels of peer acceptance. The present study is unique in that children's perceptions of support are evaluated from both the perspective of the child, as well as from the perspective of the

child's peers. By investigating reciprocity in social support, the present study allows for a more cohesive view of children's social worlds in relation to children's subjective appraisals of social support.

Perceived Social Support in Childhood and Adolescence

The bulk of studies investigating perceptions of social support in younger samples, have included special populations and identified groups of children. For example, Wenz-Gross and Siperstein (1997) conducted a study designed to investigate the perceptions of actual social support for children identifed as learning disabled. Based on prior research that highlighted the lower social status for this particular group of children, the purpose of the study was to compare friendship quality, perceived social support, and social network size for learning disabled and non-disabled children. The "My Family and Friends" interview (Reid, Landesman, & Treder, 1989) was used to assess children's perceptions of actual emotional, problem solving, and companionship support from peers and adults in and outside of the child's home. In addition to completing a measure of depressive symptoms, children's social networks, friendship quality, and classroom environment were assessed using additional interview measures. Finally, teachers rated children's classroom behavioral adjustment.

The study results indicated that children with learning difficulties did not differ in the size of their social networks as compared with non-disabled children. However, children with learning disabilities turned to peers less often for all forms of support than those without learning disabilities. Also, though there were no differences in negative friendship quality, those with learning disabilities reported less positive features in friendships in the areas of intimacy, self-esteem, loyalty, and contact. These particular

results help to explain why these children reportedly sought peers less often for social support. The results of this study should be interpreted with caution however, as the children with learning disabilities were not in full-inclusive classroom settings.

Difficulties related to disability status in children's social relationships and perceptions of actual support were also investigated by Demaray and Elliott (2001). The study investigated differences in the impact of social support for children with attention deficit hyperactivity disorder (ADHD) as compared with their non-disabled peers in a sample of all-male, predominantly Caucasian, 3rd through 6th grade students. In addition, this particular study also sought to examine the relationship between children's perceptions of actual support and social support reportedly provided by teachers and parents. Both parents and teachers completed questionnaires designed to measure the frequency and importance of support provided to the children. The Student Social Support Scale (Nolten, 1994) was used to measure children's perceptions of actual social support from parents, teachers, classmates, and friends in terms of frequency and importance. Children also completed measures of social skills and self-concept.

For all children, both social skills and self-concept were related to overall perceptions of actual social support. Also, a negative correlation was found between perceived actual social support from classmates and behavior problems for all children. However, results indicated that although children with ADHD did not differ in the importance of social support, these children reported receiving a lower level of actual support as compared to those without ADHD. Children's perceptions of actual support were also found to correlate moderately with reports of support given by parents and teachers.

In contrast to the above studies that demonstrated differences in perceptions of actual social support in relation to disability status, Demaray and Malecki (2002b) found differing results with respect to disability status in a study utilizing a combined sample taken from multiple studies. The purpose of the study was to determine critical levels of actual perceived social support for children in grades 3 through 12 as well as to investigate the relationship between perceived actual social support, self-concept, and parent-rated behavior. Perceived actual social support was measured using the Child and Adolescent Social Support Scale (Malecki et al, 1999). Results indicated moderate and significant correlations between self-concept and perceptions of actual social support for all groups of children. However, no significant differences in overall perceptions of actual social support were found when examining students with and without disabilities. However, it should be noted that in contrast to the studies conducted by Demaray and Elliott (2001) and Wenz-Gross and Siperstein (1997), all school-identified disability groups were included together without comparisons between disability groups.

In addition, in the Demaray and Malecki (2002b) study, gender differences emerged in the overall level of perceived actual support as girls reported higher levels than boys. Girls also reported a greater amount of actual support from teachers, classmates, and close friends. The study also investigated differences in the perception of social support according to age. Younger students reported a greater amount of perceived actual social support from parents and teachers than did older students. The size of the combined sample (N = 1,711) allowed for comparisons across ethnic groups revealing differences in perceptions according to race. Specifically, Native American students (N = 161) reported significantly lower overall perceptions of actual support than all other

groups. African American students (N = 99) perceived significantly higher parent and teacher actual support than Caucasian groups. Overall, students with low levels of perceived actual social support were found to have lower self-concept scores, lower adaptive skills, and more externalizing behavior problems than those with average levels of perceived actual social support.

Studies investigating perceptions of social support in adolescence have tended to focus on the relationship between support and high-risk behavior. For example, in a longitudinal study conducted across the school year, Windle (1992) sought to investigate the relationship between perceived available social support from family and friends and reported alcohol problems, depressive symptoms, and delinquency in a sample of 10th and 11th grade adolescents. A predominantly Caucasian, middle class, and suburban sample of students completed questionnaires to tap alcohol consumption, alcohol problems, delinquent activity, stressful life events, and depressive symptoms. Social support was measured using the Perceived Social Support Family and Friends Scale (Procidano & Heller, 1983). The importance of adequate levels of perceived available support from family was demonstrated in results indicating that reports of life stress and low available family support were associated with higher levels of alcohol consumption and delinquent behavior. However, the combination of stress and low family support were the only statistically significant predictors of problem behaviors for girls, not boys.

Gender differences also manifested in the area of perceived available social support from friends. The interaction between reported adolescent stress and perceived available friend social support for boys was statistically significant though low in magnitude, but consistently predicted depressive symptoms in boys. For boys who

reported low to moderate levels of stress, high perceived available support from friends appeared to buffer depressive symptoms. Interestingly however, for boys with the highest levels of stress, high levels of perceived available social support from friends were associated with higher levels of depression. Because stress was significantly related to delinquency, Windle (1992) suggested that the social interactions among delinquent and aggressive boys "may not facilitate more intimate exchanges that characterize friendships among some non-aggressive children, and that may be essential for effective stress buffering" (p. 529), though the same peers may be perceived as supportive.

With a sample of more diverse, though younger adolescents, Lifrak, McKay, Rostain, Alterman, and O'Brien (1997) investigated the relationship between perceived available social support, perceived self-competence, and substance use in a group of 7th and 8th graders. Substance use included an assessment of cigarette smoking, marijuana use, and alcohol use. The sample included approximately 59% Caucasian, 28% African American, and 13% of students from other ethnic backgrounds. Perceived available social support from parents, teachers, classmates, and close friends was measured using Harter's Social Support Scale for Children and Adolescents (1985a). Overall, higher perceived self-worth and scholastic competence were related to less substance use in both boys and girls. Gender differences were also apparent, as greater perceived available social support from parents and teachers was associated with lower substance use from boys, while greater perceived available social support from classmates was actually associated with more substance use for girls. The relationship between substance use and perceived available social support also appeared to be moderated by perceived scholastic competence. In both boys and girls, greater perceived available support from friends was

associated with more substance use for those with low scholastic competence. On the other hand, perceived available social support for boys and girls was negatively related or unrelated to substance use for those with high scholastic competence.

Robinson (1995) investigated the relationship between perceived self-worth and various types of perceived available social support in a predominantly Caucasian, middle class, suburban adolescent sample of 7th through 12th grade adolescents. The rationale for the study was based on theories emphasizing the importance of perceptions of the general peer group in forming opinions about the self. In addition, the study sought to discover variations in the relationship between different types of social support (i.e. approval, emotional support, instrumental aid) on self-worth. The Self-Perception Profile (Harter, 1985b) was used to measure adolescent academic and social competence, physical appearance, and behavior. Harter's Perceived Social Support Scale (1985a) was used to measure perceptions of available social support from parents, best friends, classmates, and teachers.

For 9th through 12th grade students, the scale was revised to additionally include a measure of perceived available social support from a romantic interest. Consistent with the increasing importance of the peer group in adolescence, the study found that across all sources, peer approval was more predictive of self-worth than either available emotional support or instrumental aid. As explained by Robinson, it is likely that approval from classmates may serve to enhance one's self-worth to a greater degree than approval by best friends, as a "best friend" is likely to be taken for granted. Gender differences also emerged in the study across type of support. Overall, girls reported higher levels of available approval, emotional support, and instrumental aid from best

friends than did boys. Also, girls reported higher levels of available emotional support from classmates than did boys. Differences between boys and girls also emerged according to the source of parental support as girls reported lower levels of available emotional support from fathers than did boys.

Demaray and Malecki (2002a) investigated perceptions of actual social support for high-risk Hispanic middle school students in grades 6 through 8. A large percentage of the students in this sample received free or reduced price lunch or some form of public aid and were therefore classified as high risk on the basis of the combination of ethnicity and socioeconomic status. The study compared children's perceptions of actual social support and behavioral adjustment indicators. Perceived actual social support was measured using the Child and Adolescent Social Support Scale (Malecki et al., 1999). Results indicated a positive link between total "perceived actual" social support scores and adolescent self-ratings of personal adjustment. Also, as with Robinson's study described above, perceptions of actual social support varied among the source of support. Specifically, the perception of actual classmate support was negatively correlated with self-rated clinical maladjustment and emotional symptoms, and positively correlated with personal adjustment. However, the perception of actual close friend support was only correlated with personal adjustment. Therefore, it appears that for adolescents, perceptions of actual support from the larger peer group is more closely linked to personal adjustment than perceptions of actual support from a close friend.

In summary, differences in perceptions of actual and available support have been found to vary with respect to age, gender, and ethnicity, though the lack of studies comparing various ethnic groups makes it difficult to draw conclusions. Several studies

have supported the finding that girls tend to report higher levels of perceived actual support than boys and that overall, the amount of actual support tends to decrease as children age.

Particularly for younger children, variables such as disability status and severity of disability, behavior toward others, the presence of mutual friendships, and friendship quality have all been found to relate to children's perceptions of both actual and available support. During the period of adolescence however, acceptance by the overall peer group may have greater implications for adjustment than the presence of a mutual friend. As well, the role of perceptions of actual and available support during adolescence appears to vary by source. Specifically, greater perceived available support from peers has been associated with greater substance use while greater perceived available support from parents has been associated with lower levels of substance use.

Peer Acceptance in Childhood and Adolescence

In this section, studies will be reviewed investigating peer acceptance for children and adolescents. As part of this review, an attempt will be made to clarify the nature of the relationship between peer acceptance and perceived social support by exploring variables found to be related to both. It should be noted that a literature search was initially conducted for studies investigating the relationship between peer acceptance and perceived social support. However, only one study was found. This particular study conducted by East, Hess, and Lerner (1987) will be reviewed last.

A study conducted by Cook and Semmel (1999) allows for a comparison of variables linked to peer acceptance for disabled students, and variables linked to perceived social support for disabled students described previously. The study sample

consisted of students in grades 2 through 6 in a racially and socioeconomically diverse school district in southern California. Teacher ratings were used to classify disabled students into those with mild disabilities and those with severe disabilities. Those with mild disabilities included children with learning disabilities while the severe disabilities group included those with mental retardation, multiple handicaps, severe emotional disturbance, autism, and severe orthopedic impairment. Further, participating classrooms in the study were classified as heterogeneous and homogenous depending on whether the classrooms exceeded a certain percentage of disabled students in the class. Students were asked to nominate peers with whom they would like most to play with and work with. The results of this study indicated that students with disabilities received a significantly lower number of nominations as those that peers would like to work with and play with than non-disabled peers.

Severely disabled students were more accepted by their peers when they were in homogeneous classrooms as compared with severely disabled students in heterogeneous classrooms. In contrast, those with mild disabilities were more accepted within the context of heterogeneous classrooms. These results highlight the importance of the peer context when evaluating peer acceptance for disabled children as well as the level of severity of the disability. In the study conducted by Demaray and Elliott (2001) discussed earlier, boys with ADHD perceived much lower levels of social support. Though not explored in either study, these results suggest that for students with more obvious or severe disabilities, low levels of peer acceptance may function to limit disabled children's positive peer experiences, which in turn may lower levels of perceived social support. The results of this study may also help to explain why Demaray

and Malecki (2002b) did not find differences in perceptions of support for disabled students when no distinction was made between students with respect to type or severity of disability.

Peer acceptance, reciprocal friendship nominations, friendship quality, and loneliness were compared in a study of middle school students conducted by Parker and Asher (1993). The study sample consisted of a racially diverse group of students in grades 3 through 5 in the Midwest. Students were asked to rate classmates on a scale indicating how much they would like to play with each classmate. The students were then classified into groups reflecting high acceptance, low acceptance, and average acceptance. Children were also asked to nominate three "best friends" and "very best friends" and reciprocal nominations were identified. Children were identified as having a "friend" or "best friend" if the child they nominated in these categories also nominated them. Friendship quality, friendship satisfaction, and loneliness were assessed with questionnaires.

Results from this study revealed that children classified low in acceptance were much less likely to have a friend, while those with high acceptance were more likely to have a friend. This is understandable as the more nominations a child receives, the more likely it would be for that child's nominations of friends to be reciprocated. With respect to friendship quality, children who were low in acceptance reported fewer positive qualities than high and average accepted children. Also, both friendship quality and acceptance were found to predict separately for loneliness. For all children, ratings of acceptance were negatively correlated with reports of loneliness. However, level of acceptance did not mediate loneliness for children without best friends. While the results

of this study make apparent the need to explore other aspects of children's social experiences beyond peer acceptance (such as relationship quality), it is also reasonable to assume that children who have less positive friendships may perceive lower levels of support from peers. In fact, though causality was not demonstrated in the study conducted by Wenz-Gross and Siperstein (1997), children with learning disabilities indeed reported much less positive features in their friendships and also turned to their peers less for social support.

Perhaps one of the most significant findings in the area of peer acceptance is the link between rejected status and aggressive behavior. In several longitudinal studies, Dodge et al. (2003) examined the relationship between peer acceptance and the development of antisocial behavior in an ethnically diverse sample of children in grades 1 to 3 who were assessed again in grades 5 to 7. Students in the sample were asked to rate classmates according to how much they liked each child and were asked to name up to three classmates that they "especially liked" and "especially disliked". Also, children were asked to complete assessments of social information processing patterns pertaining to social rejection each year. Classroom teachers completed the Child Behavior Checklist (CBC; Achenbach & Edelbrock, 1986) to measure aggression. Results of this study revealed that boys and girls who were rejected and aggressive in early elementary school were more likely to be rated as aggressive by teachers several years later. In addition, analyses revealed that a significant amount of the effect of peer rejection was accounted for by biases in the children's social information processing patterns. As explained by the study authors, social information processing biases contribute to early peer rejection and affects later interactions with peers by increasing their "hypervigilance to hostile cues

and their tendency to generate aggressive responses to peer dilemmas and their skill in enacting those responses" (p. 390).

As explained by Dodge et al. (2003), difficulties in peer relationships may hinder children from learning necessary social skills since peer relationships provide the context for social learning. Therefore, children who are rejected may not only be at risk for poor adjustment, but may also be less likely to develop appropriate skills for establishing and maintaining positive friendships. The results of this study also make apparent the importance of children's cognitions in their interpretations of the social environment (though discussed with respect to aggression). Similarly, it is easy to speculate that early "non-supportive" experiences may also lead children to develop biased perceptions with respect to social support.

Finally, in the only study found directly comparing perceived social support to peer acceptance, East, Hess, and Lerner (1987) investigated the relationship between perceptions of social support and sociometric status in a sample of early adolescent girls. Sociometric groups based on both positive and negative peer nominations were used to classify the girls into popular, rejected, controversial, and neglected groups. (Girls were classified as controversial if they received nominations above the median on both positive and negative nominations.) The girls completed questionnaires where they were asked to nominate a boy and then a girl who characterized a list of 9 positive and 9 negative attributes. Participants in the study completed Harter's Social Support Scale for Children (1985a). However, though this particular measure was designed to measure support from various different individuals, the authors of this study combined scores from both classmates and close friends to create an overall peer social support score. The girls in

the study also completed Harter's Self-Perception Profile for Children (1985b) while teachers completed Harter's Teacher's Behavior Rating Scale (TBRS; Harter as cited in East, Hess, & Lerner, 1987). Finally, parents completed The Behavior Rating Scale (BRS; Conners, 1970) to assess each girl's overall level of adjustment.

Results from the study revealed that girls who were rejected had lower perceptions of social support from peers and displayed a greater amount of adjustment difficulties than popular girls. Also, rejected girls received much lower teacher ratings on scholastic competence and classroom behavior than controversial girls. Those classified as neglected had similar self-perceptions as those rated popular. However, neglected girls received lower teacher ratings on academic ability and higher parent ratings of behavioral difficulties. Interestingly, controversial girls rated themselves lower in physical attractiveness and athletic competence.

To summarize, very little research was found directly investigating the relationship between peer acceptance and perceived social support. However, results from studies in each of the constructs suggest that children with low levels of peer acceptance may in turn perceive lower levels of actual and available social support. Factors found to relate to low levels of peer acceptance include aggressive behavior toward others and disability status. Such early experiences may then lead to the development of biases in perception that may contribute both to continued peer rejection and corresponding low levels of perceived social support. These factors may act to impede children from participating in appropriate social experiences necessary for the development of social skills that enable children to establish friendships. The research reviewed supports the notion that behavioral difficulties may lead others to provide lower

levels of actual support to children as they perceive it. Further, both perceptions of actual and available support and ratings of peer acceptance have been linked to indices of adjustment and to self-concept for children of all ages. Definitions of terms central to understanding the variables in this study are presented next.

Definitions of Terms

Peer Acceptance. Peer acceptance is defined as ratings of classroom peers in terms of how much each peer is "liked" on a scale of 1 to 3. Children rated as liked a lot received a rating of 3, those rated as liked a little received a rating of 2, and those rated as liked the least received a rating of 1.

Expected Reciprocity Between Giving Support and Receiving Support. Expected reciprocity between giving support and receiving support is defined as consistency across nominations of peers that the nominator would help as measured by the item, "kids you would help", and nominations of peers as available to provide support to the nominator as measured by the item, "kids who would try to make you feel better if you were upset". Both the number and proportion of consistent nominations across these items were determined for time 1 and time 2.

Expected Reciprocity Between Giving Support and Seeking Support. Expected reciprocity between giving support and seeking support is defined as consistency across nominations of peers that the nominator would help as measured by the item, "kids you would help", and those from whom the nominator would seek support as measured by the item, "kids you would ask to help you with a problem". Both the number and proportion of consistent nominations across these items were determined for time 1 and time 2.

Expected Reciprocity Between Giving Support and Friendship. Expected reciprocity between giving support and friendship is defined as consistency across nominations of peers that the nominator would help as measured by the item, "kids you would help", and those nominated as good friends as measured by the item, "kids who are your good friends". Both the number and proportion of consistent nominations across these items were determined for time 1 and time 2.

Reciprocity in Giving Support. Reciprocity in giving support is defined as the match across nominations of peers that the nominator would help as measured by the item, "kids you would help", and nominations by peers that the nominator would be recipient of their support as measured by the same item. Both the number and proportion of reciprocal nominations across this item were determined for time 1 and time 2.

Reciprocity in Receiving Support. Reciprocity in receiving support is defined as the match across nominations for receiving support from peers on the item, "kids who would try to make you feel better if you were upset", and nominations by peers that the nominator is available to give them support as measured by the same item. Both the number and proportion of reciprocal nominations across this item were determined for time 1 and time 2.

Reciprocity in Seeking Support. Reciprocity in seeking support is defined as the match across nominations for seeking support from peers as measured by the item, "kids you would ask to help you with a problem", and nominations by peers that the nominator would be sought for help as measured by the same item. Both the number and proportion of reciprocal nominations across this item were determined for time 1 and time 2.

Reciprocity in Friendship. Reciprocity in friendship is defined as the match across nominations of peers that the nominator considers friends as measured by the item, "kids who are your good friends", and nominations received that the nominator is considered a good friend as measured by the same item. Both the number and proportion of reciprocal nominations across this item were determined for time 1 and time 2.

A summary of all peer acceptance and perceived social support variables, along with definitions and calculations are provided in Tables 2, 3, and 4. Sample grids for calculating expected reciprocity and reciprocity are provided in Table 5 in order to facilitate understanding of the calculations involved in the social support variables.

Table 2: Peer Acceptance Variables

Variable	Definition	Calculation
Peer Acceptance (combined gender)	Ratings of classroom peers by both males and females in terms of how much each peer is "liked" on a scale of 1 to 3.	Children rated as liked a lot received a rating of 3, those rated as liked a little received a rating of 2, and those rated as liked the least received a rating of 1. An average acceptance score was calculated for each child in the class at time 1 and time 2.
Peer Acceptance (by males)	Same as above. However, only ratings by males were considered.	(same as above)
Peer Acceptance (by females)	Same as above. However, only ratings by females were considered.	(same as above)

Table 3: Expected Reciprocity Variables

Variable	Definition	Calculation
Expected Reciprocity between Giving and Receiving Support (number)	Consistency across nominations of peers that the nominator would help as measured by the item, "kids you would help", and nominations of peers as available to provide support to the nominator as measured by the item, "kids who would try to make you feel better if you were upset".	Nominations of others by the child on both items are compared. The total number of "matches" across both items is added together.
Expected Reciprocity between Giving and Receiving Support (proportion)	(Same as above)	Proportion is determined by dividing the number of possible matches (given by the item with the largest number of nominations) by the number of actual matches.
Expected Reciprocity between Giving and Seeking Support (number)	Consistency across nominations of peers that the nominator would help as measured by the item, "kids you would help", and those from whom the nominator would seek support as measured by the item, "kids you would ask to help you with a problem".	Nominations of others by the child on both items are compared. The total number of "matches" across both items is added together.
Expected Reciprocity between Giving and Seeking Support (proportion)	(Same as above)	Proportion is determined by dividing the number of possible matches (given by the item with the largest number of nominations) by the number of actual matches.
Expected Reciprocity between Giving Support and Friendship (number)	Consistency across nominations of peers that the nominator would help as measured by the item, "kids you would help", and those nominated as good friends as measured by the item, "kids who are your good friends".	Nominations of others by the child on both items are compared. The total number of "matches" across both items is added together.
Expected Reciprocity between Giving Support and Friendship (proportion)	(Same as above)	Proportion is determined by dividing the number of possible matches (given by the item with the largest number of nominations) by the number of actual matches.

Table 4: Reciprocity Variables

Variable	Definition	Calculation
Reciprocity in Giving Support (number)	The match across nominations of peers that the nominator would help as measured by the item, "kids you would help", and nominations by peers that the nominator would be recipient of their support as measured by the same item.	Nominations given by the child among study participants are added. Number of reciprocal nominations from peers among study participants was determined.
*Reciprocity in Giving Support (proportion)	(Same as above)	Proportion of reciprocal nominations was determined by dividing the number of reciprocal nominations by the number of nominations given among study participants (potential reciprocal).
Reciprocity in Receiving Support (number)	The match across nominations for receiving support from peers on the item, "kids who would try to make you feel better if you were upset", and nominations by peers that the nominator is available to give them support as measured by the same item.	Nominations given by the child among study participants are added. Number of reciprocal nominations from peers among study participants was determined.
*Reciprocity in Receiving Support (proportion)	(Same as above)	Proportion of reciprocal nominations was determined by dividing the number of reciprocal nominations by the number of nominations given among study participants (potential reciprocal).
Reciprocity in Seeking Support (number)	The match across nominations for seeking support from peers as measured by the item, "kids you would ask to help you with a problem", and nominations by peers that the nominator would be sought for help as measured by the same item.	Nominations given by the child among study participants are added. Number of reciprocal nominations from peers among study participants was determined.
*Reciprocity in Seeking Support (proportion)	(Same as above)	Proportion of reciprocal nominations was determined by dividing the number of reciprocal nominations by the number of nominations given among study participants (potential reciprocal).

Table 4: Reciprocity Variables (continued)

Variable	Definition	Calculation
Reciprocity in Friendship (number)	The match across nominations of peers that the nominator considers friends as measured by the item, "kids who are your good friends", and nominations by peers that the nominator is considered a good friend as measured by the same item.	Nominations given by the child among study participants are added. Number of reciprocal nominations from peers among study participants was determined.
*Reciprocity in Friendship (proportion)	(Same as above)	Proportion of reciprocal nominations was determined by dividing the number of reciprocal nominations by the number of nominations given among study participants (potential reciprocal).

Note: The proportion of reciprocal nominations is calculated by dividing the number of reciprocal nominations by the number of nominations given among study participants in order to account for class size differences.

Table 5: Sample Grids for Calculating Expected Reciprocity and Reciprocity

MS. SAMPLE'S CLASS **ITEM C5 - time 1 "kids you would help"**			016 Jessica F	026 Tonya F	028 Michael M	041 Timmy M	047 Mary F	002 Sam M	Total Given	Reciprocal	Possible Reciprocal
NOMINATOR											
016	Jessica	F		**X**		X	X	X	4	1	2
026	Tonya	F	**X**		**X**	X	X		3	2	3
028	Michael	M		**X**		**X**	X		3	2	2
041	Timmy	M			**X**				1	1	1

MS. SAMPLE'S CLASS **ITEM C7 - time 1 "kids who are your good friends"**			016 Jessica F	026 Tonya F	028 Michael M	041 Timmy M	047 Mary F	002 Sam M	Total Given	Reciprocal	Possible Reciprocal
NOMINATOR											
016	Jessica	F			**X**	X	X		3	1	2
026	Tonya	F	X		X		X	X	4	0	2
028	Michael	M	**X**						1	1	1
041	Timmy	M		X	X		X		3	0	2

Note: The shaded areas encompass "non-participant" children. Reciprocal nominations within each item have been identified and noted above in each grid by a large bold "X". In order to calculate expected reciprocity, nominations by the same child are examined across items. For example, for both items C5 (top grid) and C7 (bottom grid), "Tonya" nominated Jessica and Michael.

Chapter 3

Method

Study Design

A longitudinal study design was employed in which children participated in individual interviews to complete a sociometric rating and nomination procedure during both the fall and spring of the 2002-2003 school year. The study was part of a larger project in which various other measures were administered. As part of the larger study, some of the children participated in a weekly social skills intervention.

Participants

The participants in this study included children enrolled in three second grade and three third grade classes in a culturally and racially diverse public elementary school located in a Washington, D.C. metro area suburb. The initial study sample consisted of a total of 107 participants. The three second grade classes consisted of 23, 19, and 15 participants for a total of 57 children, while the three third grade classes consisted of 16, 16, and 18 participants for a total of 50 children. Four of the six classes in the study included over 75% of the children as study participants. The other two classes included 73% and 60% of the children as study participants.

The total initial sample was comprised of 64 males (approximately 60%), and 43 females (approximately 40%). Due to subject attrition, the total sample at the end of the year was composed of 58 males (approximately 59%) and 41 females (approximately 41%). In addition, approximately 67% of the initial sample was classified by the school as African-American, 17% Hispanic, 11% Asian, and 5% Caucasian. Several children were in receipt of various supplemental educational services. According to information

provided by the classroom and special education teachers, 26.2% of students received ESOL services (English for Speakers of Other Languages), 0.9% received speech and language services, and 3.7% received special education services or otherwise had 504 plans.

Procedure

During both the fall and the spring of the school year, data collection was accomplished in two separate individual interviews (i.e. interview one and interview two). Each interview was approximately one hour in length and the second interview was conducted within two weeks of the first. During the fall of the school year, the supervising school psychologist and two school psychology graduate students visited each classroom and spoke briefly with the children about the purpose of the study. The purpose of the study and the activities involved were described as "activities about friendship and how children get along with others".

Permission forms consisting of a cover letter describing the study along with an informed consent form were distributed and the children were asked to have the forms signed by their parents and to return the forms to their teachers. The wording of permission forms varied according to whether children were assigned to one of three experimental conditions related to the social skills intervention described previously. All informed consent forms, regardless of experimental condition, requested permission for children to complete interview measures related to emotional well-being, friendship, and social experiences, and for teachers to assess and rate children's classroom behavior. Otherwise, the informed consent forms included specific information about the intervention in which the child's class was assigned. (See Appendix A for parent and

teacher consent forms.)

As incentive for returning the forms quickly, the children were promised a choice of a school appropriate "prize" such as pencils or markers which were displayed in a clear plastic bag for easy visibility. In the weeks following the distribution of the permission forms, the graduate students visited each classroom to collect the forms and distribute the prizes. Prizes were given to all children who returned the forms regardless of whether parents gave or withheld consent. Children whose parents or guardians provided consent for participation in the study were chosen as study participants.

Before each interview, the child participant was escorted from the classroom by a graduate student interviewer, and reminded about the activities that the graduate students and school psychologist had spoken about during their classes. The graduate student interviewers also brought copies of the permission forms signed by the children's parents in order to verify the child's participation in the study with the teacher.

The measures and procedures for the interviews were designed to reduce potential risks concerning the use of sociometric measures. All peer-related questions were placed in the context of a discussion involving the necessity of being sensitive to others' feelings. A summary of the procedures designed to minimize the risk of adverse impact is in Appendix H. Interviews were conducted in a variety of locations throughout the school such as the school library or the school counselor's office. A standardized introduction for each interview, developed by the graduate students, was read before each respective interview (see Appendix C for the standardized introductions).

Interview One. After arriving to the interview location, the interviewer presented the child with a student assent form before the start of the first interview. The student

assent form described the study in age-appropriate language and asked that children agree to participate in answering questions related to their feelings, classroom experiences, and relationships with classroom peers. Also, children were told that they did not have to participate if they did not want to, and could go back to their classrooms instead. Once the interviewer gained the child's assent, the child was asked to sign the assent form as an acknowledgement of willingness to participate. (See Appendix B for the student assent form). Because certain portions of the interview were to be audiotaped, the graduate student interviewer informed the child that a tape recorder would be used as a way to help the interviewer to remember what the child had said. It should be noted that none of the measures administered in interview one are under investigation in the current study. Most of these measures are related to children's social relationships and are therefore similar in investigative nature to the current study. All measures were important in defining the context of the interview activities as those related to friendship. (See Appendix D for a list of interview one measures.)

Interview Two. Interview two occurred no later than two weeks following interview one. At the start of interview two, each child was reminded of the assent form signed during interview one and asked if he or she would still like to participate. After gaining agreement, the interviewer presented the child with a classroom layout consisting of boxes representing student desks and labeled with the names of classroom peers (see Appendix E). The interviewer proceeded with administration of the sociometric peer acceptance rating measure and the peer nomination measure (see Appendix F.) Additionally, a qualitative measure designed to gauge children's understanding of peer support as well as a measure designed to rate the importance of peer support were also

administered. Data collected as a result of these measures will be analyzed in a later study. A description of these measures is also included in Appendix F. All responses were audiotaped and recorded verbatim on the administration and recording form (see Appendix G for the sociometric recording form). Finally, measures of emotion, peer relations, and self-perception were administered. These measures are listed in Appendix D, and are not under investigation in the current study**.**

At the conclusion of the administration of interview two, the interviewer stressed the issue of confidentiality and again made sure that the child understood that he or she was not to share responses with other children, but should talk with an adult such as a teacher or parent if the need arose. The interviewer thanked the child for participating and offered the child a choice of treat, such as candy or a colorful pencil as a way of saying "thank you". The interviewer walked the child back to class and engaged the child in casual conversation to discuss which activities the child enjoyed the most and why.

Measures

Peer Acceptance. A peer rating measure, similar to that used by Singleton and Asher (1977), was used to determine children's level of acceptance for classroom peers. The measure consists of asking each child whether he or she likes other classroom peers "a lot," "a little", or "the least". This procedure has been utilized widely (Terry, 2000) and provides a complete account of the extent to which each child accepts every other child in the classroom (Asher & Hymel, 1981). In the current study, ratings of liked "a lot" received a rating of 3, liked "a little" a rating of 2, and liked "the least" a rating of 1. The ratings in this procedure, though truly ordinal level in nature, were treated as interval

level data in the analysis of results such that means were computed for each child. The treatment of the data in this manner is consistent with prior research (e.g. Asher & Hymel, 1981; Parker & Asher, 1993).

Compared with sociometric nominations, sociometric ratings are assumed to be more reliable (Asher & Hymel, 1981). Asher and Hymel found that sociometric ratings had higher test-retest reliability coefficients than nomination measures for elementary school children. In addition, sociometric ratings can potentially allow for greater differentiation in children's perceptions of peers (Terry, 2000).

Sociometric Nominations. Sociometric peer nomination procedures were originally developed by Moreno (1934). Typically, sociometric nomination research is accomplished without the use of standardized or commercially published measures. This measure consists of asking children to nominate peers according to specific criteria. The current study involved 10 items from the Perceived Classroom Peer Social Support Scale (Teglasi & Lanier, unpublished). These items were designed to measure children's perceptions of four dimensions of social support in the classroom: giving support, receiving support, seeking support, and friendship. Also, 20 additional items were included from several published scales (i.e. Crick & Werner, 1998; Perry, Kusel, & Perry, 1988), which were designed to measure bullying, victimization, and helping behavior. All nomination items were presented in a pre-determined randomized order in an "unlimited choice" peer nomination procedure. Terry (2000) compared a limited choice procedure with an unlimited choice procedure and found the unlimited nomination procedure to be statistically preferable. Unlimited choice results were found to have a much greater range of values and more normal distributional properties.

Internal consistency in sociometric measures has been rarely evaluated due to the argument that agreement among voters in sociometric choices is not expected (Terry, 2000). However, reliability of measurement is important in evaluating the appropriateness of sociometric measures (Terry, 2000). Sociometric measures are assumed to be both reliable and valid in measuring peer relationships for elementary school children (Asher & Hymel, 1981). As opposed to test-retest reliability, the stability of sociometric measures is typically assessed in intervals ranging from three months to two years (Terry, 2000).

The current study involves an analysis of the following four items only from the Perceived Classroom Peer Social Support Scale (Teglasi & Lanier, unpublished):

1. Kids who would make you feel better if you were upset
2. Kids you would help
3. Kids you would ask to help you with a problem
4. Kids who are your good friends

Research Questions and Statistical Analyses

Peer Acceptance

1. Do boys or girls receive higher or lower ratings of peer acceptance?
2. Do boys or girls receive higher or lower ratings of peer acceptance from same or opposite gender peers?
3. Are the variables (combined gender ratings, ratings by males, and ratings by females) stable across the school year?

Peer acceptance ratings were evaluated at time 1 and time 2 to determine average combined gender ratings, average ratings by females, and average ratings by males. Three split-plot ANOVAs were conducted using gender as a between subjects factor and time as a within subjects factor to answer the above research questions. In each analysis,

peer acceptance ratings (i.e. combined gender ratings, ratings by males, and ratings by females) served as the dependent variable.

Expected Reciprocity Between Giving Support and Receiving Support

1. Do boys or girls say they would help the same children whom they believe would try to help them?
2. Are the variables (number and proportion of consistent nominations) stable across the school year?

The numbers and proportions of consistent nominations of those who would be helped and those whom the nominator believes would help them, were compared across gender and time. Two split-plot ANOVAs were conducted using gender as a between subjects factor and time as a within subjects factor to answer the above research questions. In one analysis, the number of consistent nominations served as the dependent variable while in the other, the proportions of consistent nominations served as the dependent variable.

Expected Reciprocity Between Giving Support and Seeking Support

1. Do boys or girls say they would help the same children from whom they would seek help?
2. Are the variables (number and proportion of consistent nominations) stable across the school year?

The numbers and proportions of consistent nominations of those who would be helped, and those from whom the nominator would seek help were compared across gender and time. Two split-plot ANOVAs were conducted using gender as a between subjects factor and time as a within subjects factor in each analysis to answer the above

research questions. In one analysis, the number of consistent nominations served as the dependent variable while in the other, the proportions of consistent nominations served as the dependent variable.

Expected Reciprocity Between Giving Support and Friendship

1. Do boys or girls say they would help the same children whom they consider friends?
2. Are the variables (number and proportion of consistent nominations) stable across the school year?

The number and proportion of consistent nominations of children who would be helped and those considered friends were compared across gender and time. Two split-plot ANOVAs were conducted using gender as a between subjects factor and time as a within subjects factor in each analysis to answer the above research questions. In one analysis, the number of consistent nominations served as the dependent variable while in the other, the proportions of consistent nominations served as the dependent variable.

Reciprocity in Giving Support

1. Do boys or girls say they would help those who say they would help them?
2. Are the variables (number and proportion of reciprocal nominations) stable across the school year?

The number and proportion of reciprocal nominations of children who would be helped and those who say they would help the nominator were compared across gender and time. Two split-plot ANOVAs were conducted using gender as a between subjects factor and time as a within subjects factor in each analysis to answer the above research questions. In one analysis, the number of reciprocal nominations served as the dependent

variable while in the other, the proportions of reciprocal nominations served as the dependent variable.

Reciprocity in Receiving Support

1. Do boys or girls say they receive support from those who say they receive support from them?
2. Are the variables (number and proportion of reciprocal nominations) stable across the school year?

The number and proportion of reciprocal nominations of those from whom the nominator would receive support, and those who would receive support from the nominator were compared across gender and time. Two split-plot ANOVAs were conducted using gender as a between subjects factor and time as a within subjects factor in each analysis to answer the above research questions. In one analysis, the number of reciprocal nominations served as the dependent variable while in the other, the proportions of reciprocal nominations served as the dependent variable.

Reciprocity in Seeking Support

1. Do boys or girls say they seek support from those who would seek support from them?
2. Are the variables (number and proportion of reciprocal nominations) stable across the school year?

The number and proportion of reciprocal nominations of those whom the nominator would seek out for support, and those who would seek support from the nominator were compared across gender and time. Two split-plot ANOVAs were conducted using gender as a between subjects factor and time as a within subjects factor

in each analysis to answer the above research questions. In one analysis, the number of reciprocal nominations served as the dependent variable while in the other, the proportions of reciprocal nominations served as the dependent variable.

Reciprocity in Friendship

1. Are boys or girls considered friends by those whom they consider friends?
2. Are the variables (number and proportion of reciprocal nominations) stable across the school year?

The number and proportion of reciprocal nominations of those whom the nominator considers friends, and those who consider the nominator a friend were compared across gender and time. Two split-plot ANOVAs were conducted using gender as a between subjects factor and time as a within subjects factor in each analysis to answer the above research questions. In one analysis, the number of reciprocal nominations served as the dependent variable while in the other, the proportions of reciprocal nominations served as the dependent variable.

Relationship Between Peer Acceptance and Expected Reciprocity in Perceived Social Support

1. For boys and girls, is peer acceptance related to expected reciprocity between giving support and receiving support, expected reciprocity between giving support and seeking support, and expected reciprocity between giving support and friendship?

Using Pearson correlations, combined gender peer acceptance ratings at time 1 and time 2 were correlated with the numbers and proportions of consistent nominations

for each expected reciprocity variable at time 1 and time 2 respectively, to answer the above research question.

Relationship Between Peer Acceptance and Reciprocity in Perceived Social Support

1. For boys and girls, is peer acceptance related to reciprocity in giving support, reciprocity in receiving support, reciprocity in seeking support, and reciprocity in friendship?

Using Pearson correlations, combined gender peer acceptance ratings at time 1 and time 2 were correlated with the numbers and proportions of reciprocal nominations for each reciprocity variable at time 1 and time 2 respectively, to answer the above research question.

Chapter 4

Results

The research questions in this study were answered using split-plot analyses of variance (ANOVA), and correlational analyses. The analyses for each research question are reported separately beginning with peer acceptance.

Preliminary Analyses

As some of the children in this study participated in a social skills intervention, preliminary analyses were conducted to compare differences by group (i.e. intervention group versus control group), on the means of all variables examined in this study across the school year. No significant differences were found between children in the intervention group and control group for any of the variables in this study.

Peer Acceptance

The means and standard deviations for all peer acceptance variables at time 1 and time 2, are presented in Table 6. The split-plot analyses for peer acceptance ratings are presented in Table 7.

Combined Gender Peer Acceptance Ratings. At time 1, the overall mean of combined gender peer acceptance ratings was 2.26, while at time 2, the overall mean was 2.24.

Boys and girls did not differ in combined gender peer acceptance ratings as the main effect for gender was not significant [$F(1, 97) = 2.91$, $p = .09$; T1, $M_{boys} = 2.31$ and $M_{girls} = 2.17$; T2, $M_{boys} = 2.26$ and $M_{girls} = 2.20$]. Also, the main effect for time was not significant [$F(1, 97) = .04$, $p = .84$], which indicates that combined gender peer

acceptance ratings for both boys and girls were stable across the school year. Finally, there was no interaction between gender and time [$F(1, 97) = 2.30$, $p = .13$].

Peer Acceptance Ratings by Boys. When peer acceptance ratings given by boys were analyzed, the main effect for gender was significant [$F(1, 97) = 56.59$, $p < .001$], and the effect size was moderate (eta squared = .36). Boys rated boys higher than girls at both times (T1, $M_{boys} = 2.48$ and $M_{girls} = 1.99$; T2, $M_{boys} = 2.42$ and $M_{girls} = 1.93$). Also, boys' ratings were stable across the school year, as the main effect for time was not significant [$F(1, 97) = 2.93$, $p = .09$]. There was no interaction between gender and time [$F(1, 97) = .05$, $p = .82$].

Peer Acceptance Ratings by Girls. When peer acceptance ratings given by girls were analyzed, the main effect for gender was significant [$F(1, 97) = 46.65$, $p < .001$], and the effect size was moderate (eta squared = .32). Girls rated girls higher than boys at both times (T1, $M_{boys} = 2.04$ and $M_{girls} = 2.49$; T2, $M_{boys} = 2.08$ and $M_{girls} = 2.60$).

Also, the main effect for time was significant [$F(1, 97) = 5.74$, $p < .05$], though the effect size was small (eta squared = .06). Therefore, girls' ratings increased across the school year. There was no interaction between gender and time [$F(1, 97) = .99$, $p = .32$].

Expected Reciprocity Between Giving Support and Receiving Support

The means and standard deviations of all expected reciprocity variables at time 1 and time 2 are presented in Table 8. The split-plot analyses for all expected reciprocity variables are presented in Table 9. (Means and standard deviations for the number of *inconsistent matches* for all expected reciprocity variables are presented in Table 10).

Table 6: Means and Standard Deviations for Peer Acceptance Ratings at Time 1 and Time 2

	Time 1 Ratings				**Time 2 Ratings**		
	Combined Gender	by Males	by Females		Combined Gender	by Males	by Females
Males; n=62				Males; n=58			
M	2.31	2.48	2.04	M	2.26	2.42	2.08
(SD)	(.30)	(.33)	(.35)	(SD)	(.32)	(.37)	(.41)
Females; n=43				Females; n=41			
M	2.17	1.99	2.49	M	2.20	1.93	2.60
(SD)	(.31)	(.31)	(.38)	(SD)	.34	.35	(.39)
Total Sample; N=105				Total Sample; N=99			
M	2.26	2.82	2.22	M	2.24	2.22	2.30
(SD)	(.31)	(.40)	(.43)	(SD)	(.32)	(.43)	(.47)

Note: Peer acceptance ratings ranged from 1 – 3. Ratings of “like the least” received a rating of 1. Ratings of “like a little” received a rating of 2. Ratings of “like a lot” received a rating of 3.

Table 7: Split-Plot Analyses of Variance (ANOVA) for Peer Acceptance

Source	df	F	p	eta squared
Combined Gender Ratings				
Gender	1	2.91	.09	
Time	1	.04	.84	
Gender X Time	1	2.30	.13	
Error	97	(.003)		
Ratings by Boys				
Gender[a]	1	56.59	<.001	.36
Time	1	2.93	.09	
Gender X Time	1	.05	.82	
Error	97	(.004)		
Ratings by Girls				
Gender[b]	1	46.65	<.001	.32
Time[c]	1	5.74	<.05	.06
Gender X Time	1	.99	.32	
Error	97	(.005)		

Note: The values enclosed in parentheses represent the mean square errors. Effect sizes (eta squared) are provided only for significant results.
[a]Boys rated boys higher than girls.
[b]Girls rated girls higher than boys.
[c]Girl's ratings increased from time 1 to time 2.

Table 8: Means and Standard Deviations for Expected Reciprocity Variables at Time 1 and Time 2

	Expected Reciprocity Between Giving Support and Receiving Support		Expected Reciprocity Between Giving Support and Seeking Support		Expected Reciprocity Between Giving Support and Friendship	
Time 1						
	Number	Proportion	Number	Proportion	Number	Proportion
Males						
n=58						
M	2.20	.33	1.83	.22	2.67	.34
(SD)	(3.86)	(.31)	(3.50)	(.20)	(3.43)	(1.62)
Range	0-24	0-1	0-13	0-.67	0-23	0-1
Females						
n=40						
M	2.77	.39	2.47	.28	3.37	.38
(SD)	(3.54)	(.35)	(3.80)	(.28)	(3.25)	(.25)
Range	0-20	0-1	0-20	0-1	0-14	0-1
Total Sample						
N=98						
M	2.43	.35	2.09	.25	2.96	.36
(SD)	(3.70)	(.33)	(3.62)	(.23)	(3.32)	(1.25)
Time 2						
	Number	Proportion	Number	Proportion	Number	Proportion
Males						
n=58						
M	2.50	.32	2.44	.32	3.77	.37
(SD)	(3.90)	(.33)	(2.62)	(.29)	(3.11)	(.22)
Range	0-23	0-1	0-11	0-1	0-16	0-1
Females						
n=40						
M	3.45	.33	2.77	.26	4.32	.34
(SD)	(5.00)	(.32)	(4.07)	(.27)	(4.05)	(.22)
Range	0-19	0-1	0-19	0-1	0-19	0-1
Total Sample						
N=98						
M	2.89	.33	2.58	.29	4.00	.36
(SD)	(4.39)	(.33)	(3.28)	(.28)	(3.52)	(.22)

Table 9: Split-Plot Analyses of Variance (ANOVA) for Expected Reciprocity

Source	df	F	p	eta squared
Expected Reciprocity Between Giving Support and Receiving Support: Number				
Gender	1	1.25	.26	
Time	1	.96	.33	
Gender X Time	1	.15	.70	
Error	96	(11.58)		
Expected Reciprocity Between Giving Support and Receiving Support: Proportion				
Gender	1	.57	.45	
Time	1	.42	.52	
Gender X Time	1	.33	.57	
Error	96	(.104)		
Expected Reciprocity Between Giving Support and Seeking Support: Number				
Gender	1	.64	.43	
Time	1	1.55	.22	
Gender X Time	1	.19	.66	
Error	96	(6.46)		
Expected Reciprocity Between Giving Support and Seeking Support: Proportion				
Gender	1	.00	.96	
Time	1	.99	.32	
Gender X Time	1	2.92	.09	
Error	96	(.005)		
Expected Reciprocity Between Giving Support and Friendship: Number				
Gender	1	1.10	.30	
Time	1	7.32	<.01	.07
Gender X Time	1	.04	.84	
Error	96	(6.82)		
Expected Reciprocity Between Giving Support and Friendship: Proportion				
Gender	1	.05	.83	
Time	1	.02	.89	
Gender X Time	1	1.36	.25	
Error	95	(.00)		

Note: The values enclosed in parentheses represent the mean square errors. Effect sizes (eta squared) are provided only for significant results.

Table 10: Means and Standard Deviations of *Inconsistent Matches* for Expected Reciprocity Variables at Time 1 and Time 2

	Expected Reciprocity Between Giving Support and Receiving Support	Expected Reciprocity Between Giving Support and Seeking Support	Expected Reciprocity Between Giving Support and Friendship
Time 1			
Number of Inconsistent Matches			
Males			
n=58			
M	2.97	3.01	4.05
(SD)	(4.86)	(4.29)	(3.80)
Range	0-26	0-23	0-17
Females			
n=40			
M	5.20	5.62	6.33
(SD)	(7.79)	(7.50)	(6.55)
Range	0-24	0-24	0-24
Total Sample			
N=98			
M	3.85	4.03	4.93
(SD)	(6.24)	(5.87)	(5.13)
Time 2			
Number of Inconsistent Matches			
Males			
n=58			
M	4.47	4.86	5.96
(SD)	(7.10)	(6.44)	(5.16)
Range	0-24	0-24	0-18
Females			
n=40			
M	6.48	7.06	7.98
(SD)	(8.18)	(8.15)	(6.49)
Range	0-24	0-24	0-24
Total Sample			
N=98			
M	5.29	5.76	6.78
(SD)	(7.59)	(7.23)	(5.79)

Number of Consistent Matches. At time 1, the overall mean number of consistent matches for boys and girls was 2.43, while at time 2 the overall mean was 2.89. (At time 1, the total mean number of inconsistent matches for giving support and receiving support was 3.85 while at time 2, the mean was 5.29.)

Though girls had slightly more matches at both times, (T1, M_{boys} = 2.20 and M_{girls} = 2.77; T2, M_{boys} = 2.50 and M_{girls} = 3.45), the main effect of gender was not significant [$F(1, 96) = 1.25$, $p = .26$]. Also, the number of consistent matches across items measuring giving support and receiving support for boys and girls was stable across the school year, as the main effect for time was not significant [$F(1, 96) = .96$, $p = .33$]. There was no interaction between gender and time [$F(1, 96) = .15$, $p = .70$].

Proportion of Consistent Matches. At time 1, the overall mean proportion of consistent matches across items measuring giving support and receiving support was .35, while at time 2, the overall mean was .33.

Boys and girls did not differ significantly from one another in the proportion of consistent matches they had across items measuring giving support and receiving support as the main effect for gender was not significant [$F(1, 96) = .57$, $p = .45$; T1, M_{boys} = .33 and M_{girls} = .39; T2, M_{boys} = .32 and M_{girls} = .33)]. Also, the proportion of consistent matches across items measuring giving support and receiving support for boys and girls was stable across the school year, as the main effect for time was not significant [$F(1, 96) = .42$, $p = .52$]. Finally, there was no interaction between gender and time [$F(1, 96) = .33$, $p = .57$].

Expected Reciprocity Between Giving Support and Seeking Support

Number of Consistent Matches. At time 1, the overall mean number of consistent

matches across items measuring giving support and seeking support was 2.09, while at time 2, the overall mean was 2.58. (At time 1, the total mean number of inconsistent matches for giving support and seeking support was 4.03 while at time 2, the mean was 5.76.)

Though girls had slightly more matches at both times, the main effect of gender was not significant [$F(1, 96) = .64$, $p = .43$; T1, $M_{boys} = 1.83$ and $M_{girls} = 2.47$; T2, $M_{boys} = 2.44$ and $M_{girls} = 2.77$]. Also, the number of consistent matches across items measuring giving support and seeking support for boys and girls was stable across the school year as the main effect for time was not significant [$F(1,96) = 1.55$, $p = .22$]. Finally, there was no interaction between gender and time [$F(1, 96) = .19$, $p = .66$].

Proportion of Consistent Matches. At time 1, the overall mean proportion of consistent matches across items measuring giving support and seeking support was .25, while at time 2 the overall mean was .29.

Boys and girls did not differ significantly from one another in the proportion of consistent matches they had across items measuring giving support and seeking support as the main effect for gender was not significant [$F(1, 96) = .00$, $p = .96$; T1, $M_{boys} = .22$ and $M_{girls} = .28$; T2, $M_{boys} = .32$ and $M_{girls} = .26$]. Also, the proportion of consistent matches across items measuring giving support and seeking support for boys and girls was stable across the school year, as the main effect for time was not significant [$F (1, 96) = .99$, $p = .32$]. Finally, there was no interaction between gender and time [$F(1, 96) = 2.92$, $p = .09$].

Expected Reciprocity Between Giving Support and Friendship

Number of Consistent Matches. Overall, boys and girls had a mean of 2.96

consistent matches across items measuring giving support and friendship at time 1, while at time 2 the overall mean was 4.00. (At time 1, the total mean number of inconsistent matches for giving support and friendship was 4.93 while at time 2, the mean was 6.78.)

Though girls had more matches at both times, the main effect of gender was not significant [$F(1, 96) = 1.10$, $p = .30$; T1, $M_{boys} = 2.67$, $M_{girls} = 3.37$; T2, $M_{boys} = 3.77$ and $M_{girls} = 4.32$]. However, the main effect of time was significant [$F(1, 96) = 7.32$, $p < .01$], though the effect size was small (eta squared = .07). Therefore, the number of matches for boys and girls increased across the school year. There was no interaction between gender and time [$F(1, 96) = .04$, $p = .84$].

Proportion of Consistent Matches. Overall, at both times boys and girls had a mean proportion of .36 consistent matches across items measuring giving support and friendship.

Boys and girls did not differ significantly from one another in the proportion of consistent matches they had across items measuring giving support and friendship, as the main effect of gender was not significant [$F(1, 95) = .05$, $p = .83$; T1, $M_{boys} = .34$ and $M_{girls} = .38$; T2, $M_{boys} = .37$ and $M_{girls} = .34$]. Also, the proportion of consistent matches across items measuring giving support and friendship for boys and girls was stable across the school year, as the main effect for time was not significant [$F (1, 95) = .02$, $p = .89$]. Finally, there was no interaction between gender and time [$F(1, 95) = 1.36$, $p = .25$].

Reciprocity in Giving Support

The means and standard deviations of all reciprocity variables at time 1 and time 2 are presented in Table 11. The split-plot analyses for all reciprocity variables are presented in Table 12. (Means and standard deviations for the number of *non-reciprocal*

nominations for all reciprocity variables are presented in Table 13).

Number of Reciprocal Nominations. Overall, boys and girls had a mean number of 1.58 reciprocal nominations for giving support at time 1, while at time 2 the overall mean was 2.94. (At time 1, the total mean number of non-reciprocal nominations for giving support was 3.17 while at time 2, the mean was 3.60.)

Boys and girls did not differ significantly from one another in the number of reciprocal nominations for giving support as the main effect of gender was not significant [$F(1, 96) = .01$, $p = .92$; T1, $M_{boys} = 1.51$ and $M_{girls} = 1.67$; T2, $M_{boys} = 3.03$ and $M_{girls} = 2.80$]. However, the main effect of time was significant [$F(1, 96) = 26.94$, $p < .001$], though the effect size was small (eta squared = .22). Therefore, boys and girls had significantly more matches at time 2. There was no interaction between gender and time [$F(1, 96) = .59$, $p = .44$].

Proportion of Reciprocal Nominations. Overall, boys and girls had a mean proportion of .34 reciprocal nominations for giving support at time 1, while at time 2 the overall mean proportion was .47.

Boys and girls did not differ significantly from one another in the proportion of reciprocal nominations for giving support as the main effect of gender was not significant [$F(1, 96) = 3.89$, $p = .05$; T1, $M_{boys} = .39$ and $M_{girls} = .30$; T2, $M_{boys} = .52$ and $M_{girls} = .41$], though the results approached significance. The main effect of time was significant [$F(1, 96) = 6.08$, $p < .05$], though the effect size was small (eta squared = .06). Therefore, boys and girls had a greater proportion of matches at time 2. There was no interaction between gender and time [$F(1, 96) = .04$, $p = .84$].

Table 11: Means and Standard Deviations for Reciprocity Variables at Time 1 and Time 2

	Reciprocity in Giving Support		Reciprocity in Receiving Support		Reciprocity in Seeking Support		Reciprocity in Friendship	
TIME 1								
	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion
Males n=62								
M	1.51	.39	.71	.33	.48	.17	2.19	.49
(SD)	(1.72)	(.36)	(.82)	(.41)	(.78)	(.29)	(1.59)	(.33)
Range	0-7	0-1	0-3	0-1	0-3	0-1	0-6	0-1
Females n=40								
M	1.67	.30	.75	.26	.60	.22	1.92	.46
(SD)	(1.77)	(.29)	(1.00)	(.35)	(.84)	(.32)	(1.49)	(.33)
Range	0-6	0-1	0-4	0-1	0-3	0-1	0-5	0-1
Total Sample N=102								
M	1.58	.36	.72	.31	.53	.19	2.08	.48
(SD)	(1.76)	(.34)	(.90)	(.39)	(.80)	(.30)	(1.55)	(.33)

Table 11: Means and Standard Deviations for Reciprocity Variables at Time 1 and Time 2 (continued)

	Reciprocity in Giving Support		Reciprocity in Receiving Support		Reciprocity in Seeking Support		Reciprocity in Friendship	
	TIME 2							
	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion
Males n=58								
M	3.03	.52	.79	.28	.90	.31	2.90	.59
(SD)	(2.68)	(.32)	(.97)	(.36)	(1.00)	(.35)	(1.64)	(.31)
Range	0-12	0-1	0-4	0-1	0-4	0-1	0-6	0-1
Females n=40								
M	2.80	.41	1.15	.33	.75	.27	2.55	.50
(SD)	(2.60)	(.30)	(1.21)	(.36)	(1.01)	(.37)	(1.60)	(.28)
Range	0-10	0-1	0-5	0-1	0-4	0-1	0-6	0-1
Total Sample N=102								
M	2.94	.47	.94	.29	.84	.29	2.75	.55
(SD)	(2.64)	(.31)	(1.08)	(.36)	(1.00)	(.35)	(1.62)	(.30)

Table 12: Split-Plot Analyses of Variance (ANOVA) for Reciprocity

Source	df	F	p	eta squared
Reciprocity in Giving Support: Number				
Gender	1	.01	.92	
Time	1	26.94	<.001	.22
Gender X Time	1	.59	.44	
Error	96	(3.07)		
Reciprocity in Giving Support: Proportion				
Gender	1	3.89	.05	
Time	1	6.08	<.05	.06
Gender X Time	1	.04	.84	
Error	96	(.11)		
Reciprocity in Receiving Support: Number				
Gender	1	1.37	.24	
Time	1	4.62	<.05	.05
Gender X Time	1	1.93	.17	
Error	96	(.60)		
Reciprocity in Receiving Support: Proportion				
Gender	1	.00	.95	
Time	1	.02	.90	
Gender X Time	1	1.75	.19	
Error	96	(.11)		
Reciprocity in Seeking Support: Number				
Gender	1	.01	.92	
Time	1	6.06	<.05	.06
Gender X Time	1	1.32	.25	
Error	96	(.62)		
Reciprocity in Seeking Support: Proportion				
Gender	1	.00	.99	
Time	1	4.55	<.05	.04
Gender X Time	1	.91	.34	
Error	96	(.00)		

Table 12: Split-Plot Analyses of Variance (ANOVA) for Reciprocity (continued)

Source	df	F	p	eta squared
Reciprocity in Friendship: Number				
Gender	1	1.20	.27	
Time	1	15.31	<.001	.14
Gender X Time	1	.05	.81	
Error	96	(1.41)		
Reciprocity in Friendship: Proportion				
Gender	1	1.16	.28	
Time	1	2.72	.10	
Gender X Time	1	.75	.39	
Error	96	(.01)		

Note: The values enclosed in parentheses represent the mean square errors. Effect sizes (eta squared) are provided only for significant results.

Table 13: Means and Standard Deviations of *Non-Reciprocal Nominations* for Reciprocity Variables at Time 1 and Time 2

	Reciprocity in Giving Support	Reciprocity in Receiving Support	Reciprocity in Seeking Support	Reciprocity in Friendship
Time 1				
	Number of Non-Reciprocal Nominations			
Males				
n=58				
M	2.58	1.93	1.90	2.30
(SD)	(3.38)	(3.45)	(1.74)	(2.34)
Range	0-16	0-21	0-9	0-12
Females				
n=40				
M	4.10	2.02	2.57	2.75
(SD)	(4.87)	(3.24)	(4.28)	(2.56)
Range	0-18	0-15	0-15	0-11
Total Sample				
N=98				
M	3.17	1.97	2.16	2.48
(SD)	(4.08)	(3.35)	(2.47)	(2.43)
Time 2				
	Number of Non-Reciprocal Nominations			
Males				
n=58				
M	2.95	1.70	1.84	2.44
(SD)	(3.54)	(3.02)	(1.65)	(2.74)
Range	0-15	0-17	0-6	0-13
Females				
n=40				
M	4.53	1.73	1.95	2.78
(SD)	(4.61)	(3.16)	(2.56)	(2.65)
Range	0-17	0-13	0-12	0-9
Total Sample				
N=98				
M	3.60	1.71	1.88	2.58
(SD)	(4.07)	(3.06)	(2.06)	(2.69)

Reciprocity in Receiving Support

Number of Reciprocal Nominations. Overall, boys and girls had a mean number of .72 reciprocal nominations for receiving support at time 1, while at time 2 the overall mean was .94. (At time 1, the total mean number of non-reciprocal nominations for receiving support was 1.97 while at time 2, the mean was 1.71.)

Boys and girls did not differ significantly from one another in the number of reciprocal nominations for receiving support, as the main effect of gender was not significant [$F(1, 96) = 1.37$, $p = .24$; T1, $M_{boys} = .71$ and $M_{girls} = .75$; T2, $M_{boys} = .79$ and $M_{girls} = 1.15$]. However, the main effect of time was significant [$F(1, 96) = 4.62$, $p < .05$], though the effect size was small (eta squared = .05). Therefore, boys and girls had more reciprocal nominations at time 2. Finally, there was no interaction between gender and time [$F(1, 96) = 1.93$, $p = .17$].

Proportion of Reciprocal Nominations. Overall, boys and girls had a mean proportion of .31 reciprocal nominations at time 1, while at time 2 the overall mean proportion was .30.

Boys and girls did not differ significantly from one another in the proportion of reciprocal nominations for receiving support as the main effect of gender was not significant [$F(1, 96) = .00$, $p = .95$; T1, $M_{boys} = .33$ and $M_{girls} = .27$; T2, $M_{boys} = .28$ and $M_{girls} = .33$]. Also, the proportions were stable across the school year, as the main effect of time was not significant [$F(1, 96) = .02$, $p = .90$]. Finally, there was no interaction between gender and time [$F(1, 96) = 1.75$, $p = .19$].

Reciprocity in Seeking Support

Number of Reciprocal Nominations. Overall, boys and girls had a mean number

of .53 reciprocal nominations for seeking support at time 1, while at time 2 the overall mean was .84. (At time 1, the total mean number of non-reciprocal nominations for seeking support was 2.16 while at time 2, the mean was 1.88.)

Boys and girls did not differ significantly from one another in the number of reciprocal nominations for seeking support, as the main effect of gender was not significant [$F(1, 96) = .01$, $p = .92$; T1, $M_{boys} = .48$ and $M_{girls} = .60$.; T2, $M_{boys} = .90$ and $M_{girls} = .75$]. However, the main effect of time was significant [$F(1, 96) = 6.06$, $p < .05$], though the effect size was small (eta squared = .06). Therefore, boys and girls had significantly more reciprocal nominations at time 2 ($t = 3.17$, $df = 57$, $p < .05$). Finally, there was no interaction between gender and time [$F(1, 96) = 1.33$, $p = .25$].

Proportion of Reciprocal Nominations. Overall, boys and girls had a mean proportion of .19 reciprocal nominations at time 1, while at time 2 the overall mean proportion was .29.

Boys and girls did not differ significantly from one another in the proportion of reciprocal nominations for seeking support as the main effect of gender was not significant [$F(1, 96) = .00$, $p = .99$; T1, $M_{boys} = .17$ and $M_{girls} = .22$; T2, $M_{boys} = .31$ and $M_{girls} = .27$]. The main effect of time however, was significant [$F(1, 96) = 4.55$, $p = <$ .05], though the effect size was small (eta squared = .04). Therefore, for boys and girls, the proportion of reciprocal nominations increased significantly from time 1 to time 2 ($t = 2.43$, $df = 57$, $p < .05$). Finally, there was no interaction between gender and time [$F(1, 96) = .91$, $p = .34$].

Reciprocity in Friendship

Number of Reciprocal Nominations. Overall, boys and girls had a mean number

of 2.08 reciprocal nominations for friendship at time 1, while at time 2 the overall mean was 2.75. (At time 1, the total mean number of non-reciprocal friendship nominations was 2.48 while at time 2, the mean was 2.58.)

Boys and girls did not differ significantly from one another in the number of reciprocal nominations for friendship, as the main effect of gender was not significant [$F(1, 96) = 1.20$, $p = .28$; T1, $M_{boys} = 2.19$ and $M_{girls} = 1.92$; T2, $M_{boys} = 2.90$ and $M_{girls} = 2.53$]. However, the main effect of time was significant [$F(1, 96) = 15.31$, $p < .001$], though the effect size was small (eta squared = .14). Therefore, boys and girls had significantly more reciprocal nominations at time 2. Finally, there was no interaction between gender and time [$F(1, 96) = .05$, $p = .81$].

Proportion of Reciprocal Nominations. Overall, boys and girls had a mean proportion of .48 reciprocal friendship nominations at time 1, while at time 2 the overall mean proportion was .55.

Boys and girls did not differ significantly from one another in the proportion of reciprocal nominations for friendship as the main effect of gender was not significant [$F(1, 96) = 1.16$, $p = .28$; T1, $M_{boys} = .49$ and $M_{girls} = .46$; T2, $M_{boys} = .59$ and $M_{girls} = .50$;]. Also, the main effect of time was not significant [$F(1, 96) = 2.72$, $p = .10$], which indicates that the proportion of reciprocal friendship nominations was stable across time. Finally, there was no interaction between gender and time [$F(1, 96) = .75$, $p = .39$].

Relationship Between Peer Acceptance and Expected Reciprocity in Perceived Social Support

Correlations between combined gender peer acceptance ratings and all expected reciprocity variables are presented in Table 14. At time 1 and time 2, peer acceptance

Table 14: Pearson Correlations of Peer Acceptance Ratings (Combined Gender) with Expected Reciprocity Variables at Time 1 and Time 2

Time 1

	Expected Reciprocity Between Giving Support and Receiving Support		Expected Reciprocity Between Giving Support and Seeking Support		Expected Reciprocity Between Giving Support and Friendship	
	Number	Proportion	Number	Proportion	Number	Proportion
Males n=62						
r	.15	.21	.04	-.08	.19	.28*
Females n=40						
r	.07	-.27	.08	-.06	.22	-.13
Total Sample N=102						
r	.10	-.03	.02	-.11	.18	.09

Time 2

	Number	Proportion	Number	Proportion	Number	Proportion
Males n=62						
r	.12	.06	.13	-.11	.15	.26*
Females n=40						
r	.26	.08	.23	.24	.31	.29
Total Sample N=102						
r	.17	.06	.17	.04	.22*	.28**

Note: Peer acceptance ratings at time 1 are correlated with expected reciprocity variables at time 1. Peer acceptance ratings at time 2 are correlated with expected reciprocity variables at time 2.

*Correlation is significant at the .05 level (2-tailed).
**Correlation is significant at the .01 level (2-tailed).

Table 15: Pearson Correlations of Peer Acceptance Ratings (Combined Gender) with Reciprocity Variables, Time 1 and Time 2

	Reciprocity in Giving Support		Reciprocity in Receiving Support		Reciprocity in Seeking Support		Reciprocity in Friendship	
	TIME 1							
	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion
Males								
Correlation	.40**	.17	.57**	.52**	.29*	.17	.38*	.52**
Females								
Correlation	.42**	.02	.30	.25	.28	.27	.35*	.25
Total Sample								
Correlation	.43**	.42**	.38**	.14	.26**	.19	.38**	.41**

Note: Peer acceptance ratings at time 1 are correlated with reciprocity variables at time 1. Peer acceptance ratings at time 2 are correlated with reciprocity variables at time 2.

*Correlation is significant at the .05 level (2-tailed).
**Correlation is significant at the .01 level (2-tailed).

Table 15: Pearson Correlations of Peer Acceptance Ratings (Combined Gender) with Reciprocity Variables, Time 1 and Time 2 (continued)

	Reciprocity in Giving Support		Reciprocity in Receiving Support		Reciprocity in Seeking Support		Reciprocity in Friendship	
	TIME 2							
	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion
Males								
Correlation	.25	.17	.34**	.27*	.32*	.35**	.49**	.62**
Females								
Correlation	.40**	-.03	.32*	.53**	.23	.18	.34*	.34*
Total Sample								
Correlation	.37*	.09	.31**	.37**	.29**	.28**	.43**	.51**

Note: Peer acceptance ratings at time 1 are correlated with reciprocity variables at time 1. Peer acceptance ratings at time 2 are correlated with reciprocity variables at time 2.

*Correlation is significant at the .05 level (2-tailed).
**Correlation is significant at the .01 level (2-tailed)

was positively correlated to the proportion of consistent matches across items measuring giving support and friendship for males. At time 2, peer acceptance was positively correlated with both the number and proportion of consistent matches across items measuring expected reciprocity between giving support and friendship for the entire sample.

Relationship Between Peer Acceptance and Reciprocity in Perceived Social Support

As illustrated in Table 15, small to moderate positive correlations were found between peer acceptance and reciprocal nominations across all areas of social support including giving support, receiving support, seeking support, and friendship for girls and boys. Therefore, students who received higher peer acceptance ratings tended to have more reciprocal nominations. Also, students who received higher peer acceptance ratings tended to have a greater proportion of their nominations reciprocated.

Additional Correlational Analyses

In order to aid in the interpretation of findings, additional correlational analyses were conducted. In Table 16, a comparison is made of reciprocity variables at time 1 with reciprocity variables at time 2. As illustrated in the table, a greater number of significant positive correlations were found for the number of reciprocal nominations for support. For boys and girls, moderate positive correlations between the number of reciprocal nominations for reciprocity variables at time 1 and time 2 were found across all areas of support with the exception of “seeking support”, which was not found to be significant for girls.

In Table 17, a comparison is made of expected reciprocity variables at time 1 and time 2, with reciprocity variables at time 1 and time 2. To clarify, expected

reciprocity between giving support and receiving support was correlated with reciprocity in receiving support; expected reciprocity between giving support and seeking support was correlated with reciprocity in seeking support; and finally, expected reciprocity between giving support and friendship was correlated with reciprocity in friendship. Results indicate moderate positive correlations primarily between the number of consistent matches for expected reciprocity and the number of reciprocal nominations for support.

Table 16: Pearson Correlations of Reciprocity Variables at Time 1 with Reciprocity Variables at Time 2

Number of Reciprocal Nominations			
	Males	Females	Total Sample
Giving Support	.42**	.45**	.43**
Receiving Support	.27*	.52**	.39**
Seeking Support	.41**	.09	.27**
Friendship	.42*	.52*	.46*
Proportion of Reciprocal Nominations			
	Males	Females	Total Sample
Giving Support	.01	-.12	.01
Receiving Support	.13	.45*	.24*
Seeking Support	.18	.26	.29*
Friendship	.40*	.10	.21*

Note: The number of reciprocal nominations at time 1 is correlated with the number of reciprocal nominations at time 2 for each area of support. The proportion of reciprocal nominations at time 1 is correlated with the proportion of reciprocal nominations at time 2 for each area of support.

*Correlation is significant at the .05 level (2-tailed).
**Correlation is significant at the .01 level (2-tailed).

Table 17: Pearson Correlations of Expected Reciprocity Variables at Time 1 and Time 2, with Reciprocity Variables at Time 1 and Time 2

Expected Reciprocity Between Giving and Receiving Support with Reciprocity in Receiving Support						
	Males		Females		Total Sample	
	Number	Proportion	Number	Proportion	Number	Proportion
Time 1	.34**	-.02	.59**	-.14	.44**	-.07
Time 2	.35**	.01	.78**	-.06	.58**	.06

Expected Reciprocity Between Giving and Seeking Support with Reciprocity in Seeking Support						
	Males		Females		Total Sample	
	Number	Proportion	Number	Proportion	Number	Proportion
Time 1	.14	.08	.44**	.05	.16	.02
Time 2	.56**	-.01	.65**	.04	.61**	.02

Expected Reciprocity Between Giving Support and Friendship with Reciprocity in Friendship						
	Males		Females		Total Sample	
	Number	Proportion	Number	Proportion	Number	Proportion
Time 1	.51**	.07	.48**	.01	.48**	.04
Time 2	.40**	.28*	.60**	.14	.48**	.23*

Note: The number of consistent nominations for expected reciprocity variables is correlated with the number of reciprocal nominations for reciprocity variables for the corresponding area of support and time. Proportions of consistent nominations for expected reciprocity variables are correlated with proportions of reciprocal nominations for reciprocity variables for the corresponding area of support and time.

*Correlation is significant at the .05 level (2-tailed).
**Correlation is significant at the .01 level (2-tailed).

Chapter 5

Discussion

The primary purpose of this study was to investigate the relationship between peer acceptance and children's perceptions of available classroom peer social support using sociometric rating and nomination procedures. Sociometric nomination items were created to measure perceived available classroom peer support in terms of giving support, receiving support, seeking support, and friendship. This study examined the consistency of children's nominations across items for the same child, as well as reciprocal matches on items for each child and nominated peers. For all variables, gender differences and stability across the school year were examined. Finally, the relationship between peer acceptance and all social support variables was examined in correlational analyses. The study findings are discussed next.

Gender Differences and Stability of Peer Acceptance Ratings. Overall, boys and girls did not differ on ratings of peer acceptance. On a scale of 1 to 3 (where 1 corresponded to "like the least"), both boys and girls received overall ratings greater than 2, indicating general acceptance by classroom peers of both genders. However, when ratings were analyzed separately by gender, it was found that both boys and girls rated their own gender higher at both times (i.e. boys rated boys higher and girls rated girls higher). This finding is parallel to prior research examining gender differences in children's friendships that indicates that children of all ages tend to interact socially with those of the same sex (George & Hartmann, 1996; Hartup, 1989). Therefore, children's preference for same sex peers not only pertains to friendships, but also to acceptance of others in the larger classroom peer group. This finding has implications for research in

peer acceptance, as inequities in gender distribution may lead to faulty conclusions about children's' level of acceptance in the peer group.

An interesting finding is that girls' ratings of girls increased across the school year, though boys' ratings of boys remained stable. However, because the effect size was small, this finding is interpreted with caution. The increase in girls' ratings of girls over the course of the school year may be explained by research with elementary school age children concerning gender differences in the structure of children's social networks. First, girls have been found to form smaller and more intimate social networks while boys tend to form larger, less exclusive networks (Benenson, Apostoleris, & Parnass, 1998; Parker & Seal, 1996). Also, girls have been found to give more positive descriptions of their friendships than boys, and to experience less conflict in their friendships than boys (Furman, 1996). Therefore, girls' increase in acceptance ratings for other girls may be related to gender differences in children's social networks, and in their interactional styles with same-sex peers. Again however, due to limitations in the size of the number of girls in the study sample, additional research using a larger sample of girls is needed for clarification of this finding.

Gender Differences and Stability of Expected Reciprocity in Social Support. Boys and girls did not differ in either the number or the proportion of consistent matches for giving support and receiving support (i.e. saying they would help those they believe would help them), giving support and seeking support (i.e. saying they would help those from whom they would seek help), or giving support and friendship (saying they would help those considered friends). However, though significant mean differences for the number of consistent matches were not found between boys and girls, it is noted that girls

had slightly more matches at both times for each set of items. Therefore, due to the small number of girls in the study, the lack of statistically significant mean differences may be related to sample size.

For boys and girls, the number of consistent nominations across items measuring giving support and friendship increased across the school year, though the effect size was small. In other words, at the end of the school year, boys and girls said they would help a greater number of peers that they also considered friends. By the end of the year, children had at least 4 consistent nominations across items measuring giving support and friendship. Interestingly, the proportion of consistent nominations for giving support and friendship was stable, and at both times was 36%. Therefore, children were also willing to help a large percentage of those not considered friends.

Children had at least 2 consistent nominations across items measuring giving support and receiving support, and at least 2 consistent nominations across items measuring giving support and seeking support. The proportions of consistent nominations also remained stable across the school year for both pairs of items. Approximately one third of nominations for giving support and seeking support were the same. The proportion for consistent nominations for giving support and receiving support was slightly smaller and ranged from 25 – 29%. Therefore, though a large proportion of nominations were not consistent across these items, it appears that children have identified at least a small number of peers whom they would help, from whom they also expect to receive or seek support. In general however, the large proportion of inconsistent nominations further suggests that children's perceived willingness to help their peers is also not limited to peers from whom children would seek help, or

constrained by notions of whether the same peers would help them. These findings suggest that the criteria children use for deciding whom to help are not governed by their expectations for reciprocal support. Helping behavior may be more governed, for example, by whether the recipient is perceived as needing help. Future research in children's expectations for reciprocity in social support should examine the criteria children use for deciding whom to help.

Gender Differences and Stability of Reciprocity in Social Support. Boys and girls did not differ in the number of reciprocal nominations they had for giving support (i.e. saying they would help those who say they would help them), receiving support (i.e. saying they receive support from those who say they receive support from them), seeking support (i.e. saying they seek support from those who say they seek support from them), or friendship (i.e. saying they are friends with those who also consider them friends). However, for boys and girls, the number of reciprocal nominations increased across the school year for giving support, receiving support, and friendship.

By the end of the school year, boys and girls had at least 2 reciprocal nominations for giving support, and at least 2 reciprocal nominations for friendship. However, the mean number of reciprocal nominations for receiving support and seeking support was less than 1. One explanation for these findings is that perceptions of receiving and seeking support may be less salient for children than perceptions of giving support and friendship. In addition, the concepts of receiving support and seeking support may be equated with neediness, which may lead to underreporting.

No differences were found between boys and girls in the proportions of nominations that were reciprocated. With respect to giving support, receiving support,

and seeking support, approximately one third of boys' and girls' nominations were reciprocated. The overall proportions of reciprocal friendship nominations was higher as approximately one half of boys' and girls' friendship nominations were reciprocated. In other words, children were accurate in who they perceived as "good friends" at least half of the time. By the end of the year, boys and girls also had a greater proportion of their nominations reciprocated for giving support, and also for seeking support. The effect sizes for both, however, were small.

Results of the current study suggest that over the course of the school year, social support builds across all dimensions for young elementary school children. These results have implications for research utilizing sociometric nomination procedures for investigations in social support as the findings may differ depending on the time of year that the sociometric information is gathered. Moderate size positive correlations between time 1 and time 2 reciprocity variables support the need for a consideration of the length of time that a peer group has been in existence prior to collecting sociometric information on social support.

Relationship Between Peer Acceptance and Expected Reciprocity in Social Support. Relatively few significant positive correlations were found between peer acceptance and expected reciprocity in social support. One noteworthy finding that warrants further investigation is that peer acceptance ratings were found to be related to the proportion of consistent matches that boys had across items measuring giving support and friendship. Therefore, the more boys were liked, the greater the proportion of consistent matches they had for peers they would help, and for peers nominated as friends. This pattern suggests that boys who are more willing to help those perceived as

friends, are more liked. It should be noted however, that by the end of the year, this pattern was also true for girls. For girls, correlations for between peer acceptance and both the number and proportion of consistent matches for expected reciprocity tended to increase across the school year, though none of the correlations were significant. However, due to the small number of girls in the study, the lack of statistical significance for girls may be related to the size of the sample of girls.

Relationship Between Peer Acceptance and Reciprocity in Social Support. In contrast to findings between peer acceptance and expected reciprocity, there were many more significant correlations between peer acceptance and reciprocity in social support. Peer acceptance was related to reciprocal friendship and to reciprocity across all dimensions of social support for boys and girls. The more children were liked, the more likely they were to have reciprocal nominations for friendship and support. In addition, the more children were liked, the more likely they were to have a greater proportion of their nominations reciprocated. Therefore, children who are liked experience more actual support. This finding is consistent with research that indicates that elementary school children in grades three through five, with lower levels of acceptance report less caring and guidance from their peers than those with higher levels of acceptance (Parker & Asher, 1993).

Results from the correlational analysis of the relationship between expected reciprocity and actual reciprocity indicate that the number of *consistent matches* for expected reciprocity and the number of *actual reciprocal nominations* are positively related. In other words, the greater the number of consistent matches across items measuring expectations for friendship and support, the more likely children are to have

actual reciprocal nominations for friendship and support. However, as discussed earlier, peer acceptance was much more strongly related to actual reciprocity in social support as opposed to expected reciprocity. Though the measures used can not verify what actually occurs in the classroom, it is likely that reciprocal nominations are closely related to demonstrations of actual support in the classroom. Therefore, though *actual* support may be related to one's *expectations* for support, it is reasonable that how much one is liked is more related to actual demonstrations support, as opposed to one's expectations for support. Additional research is needed however, to determine whether actual demonstrations of support are indeed related to reciprocal nominations for friendship and support.

Limitations of the Study

A number of limitations are present in this study. First, though data from each participating classroom was pooled together, each classroom can be considered an independent social environment. As such, certain factors unique to each classroom may affect the classroom social climate, which may directly affect children's relationships within each classroom. For example, individual teachers may differentially emphasize certain social behaviors such as cooperation and helping. In classrooms where such behaviors and attitudes are emphasized, children may be more likely to form positive relationships with peers, which may affect children's perceptions of peer support in the classroom, particularly over time. In addition, individual teachers may differentially employ the use of group work completion projects where children are required to help one another, which may also affect children's perceptions of peer support in the classroom

Another limitation involves the lack of independence in observations for reciprocal nominations. The number of reciprocal nominations for any given child is influenced both by the number of nominations given as well as the number of nominations received from peers. Therefore, those who give a greater number of nominations for any particular item are more likely to have reciprocal nominations. It was noted during data collection that some children were very careful in considering their responses, while others gave broad inclusive responses such as “everybody” or “nobody”. The tendency to give broad inclusive responses may be related to the children’s stage of development. According to Rubin et al. (1999), children may interpret the concept of friendship differently at different ages, leading younger children to give socially desirable responses or to name acquaintances rather than best friends. Therefore, interpretations of the significance of reciprocity should be made with caution and with consideration of the number of non-reciprocal nominations.

Finally, computing the numbers and proportions involved in the analysis of expected reciprocity and reciprocity is a tedious and time-consuming process. Though the information gained is valuable, this aspect of sociometric research may dissuade many from the use of these techniques.

Conclusions

Overall, results of this study did not reveal gender differences in children’s expectations for support or in actual reciprocity of support. Results indicate that children’s willingness to help their peers is not constrained by notions of receiving help or perceptions of friendship. However, this study did not investigate qualitative aspects of children’s perceptions of helping and social support. Therefore, additional information

is needed to gain a more complete understanding of children's perceptions of available support. As well, the results of analyses of peer acceptance ratings that revealed gender preferences, has implications for gender balanced classrooms, as well as implications for research using peer acceptance ratings. Future research might examine whether children's willingness to help others is constrained by gender preferences.

Results of this study also indicate that for second and third grade children, social support builds across the school year. This finding has implications for maintaining peer groups from grade to grade. Information gathered anecdotally from professional practice suggests that children often report difficulties in transitioning between grades when the peer group is not maintained. Therefore, maintaining an intact peer group across grades may aid in children's adjustment to new classroom environments.

Appendix A

Parent and Teacher Consent Forms

Parent consent form for children participating in the social skills intervention

As the parent or guardian of _____, I state that I am over 18 years of age and give permission for my child to participate in a program of research being conducted by Dr. Hedwig Teglasi PhD in the Department of Counseling and Personnel Services at the University of Maryland, College Park.

The program involves my child's participation in…

- weekly reading groups about bullies, either in the classroom or in small groups with discussion, for a total of 25 one-hour sessions during the 2002-2003 school year. The small groups will be audiotaped.
- two individual one-hour interviews with researchers twice during the school year - once during Fall of 2002, and once during Spring 2003, portions of which will be audiotaped

The interviews involve…

- Speaking with researchers about friendship, self-concept, and relationships with classmates
- Participating in a storytelling activity
- Completing measures designed to measure self-concept, anger, sadness, anxiety
- Completing a measure of listening comprehension

Information collected is confidential and not part of my child's educational record and will not influence his or her educational program. After all information has been collected, my child's name will be removed.

Although my child may not personally benefit from this research, the activities that my child will participate in have not been found to involve any risks beyond those encountered in typical everyday interactions.

The study is designed to help the investigators learn more about the Program as well as about student adjustment, development, and relationships with classroom peers. My child is free to withdraw from participation at any time and without penalty

Principal Investigator:	Dr. Hedwig Teglasi, PhD, with Lee Rothman, School Psychologist
Work Address:	Department of Counseling & Personnel Services 3214 Benjamin Building, University of Maryland College Park MD 20742
Work Phone:	301-405-2867

DATE_____

NAME OF PARENT OR GUARDIAN_____

SIGNATURE OF PARENT OR GUARDIAN_____

Parent consent form for children not receiving the social skills intervention

As the parent or guardian of _____, I state that I am over 18 years of age and give permission for my child to participate in a program of research being conducted by Dr. Hedwig Teglasi PhD in the Department of Counseling and Personnel Services at the University of Maryland, College Park.

The program involves my child's participation in…

- two individual one-hour interviews with researchers twice during the school year, once during Fall of 2002, and once during Spring 2003, portions of which will be audiotaped
- Speaking with researchers during the interviews about friendship, self-concept, and relationships with classmates.
- Participating in a storytelling activity and completing a listening comprehension test during the interviews.

Additionally, my child's teachers will complete measures designed to assess classroom adjustment, behavioral style, and relationships with other children.

Information collected is confidential and will not be included in my child's educational record. Participation will not influence my child's educational program. After all information has been collected, my child's name will be removed.

The activities that my child will participate in have not been found to involve any risks beyond those encountered in typical everyday interactions.

I understand that my child may or may not benefit from participating in this study. The study is designed to help the investigator learn more about student adjustment, development, and relationships with classroom peers. My child is free to withdraw from participation at any time and without penalty.

Principal Investigator:	Dr. Hedwig Teglasi, PhD with Lee Rothman, School Psychologist
Work Address:	Department of Counseling& Personnel Services 3214 Benjamin Building, University of Maryland College Park MD 20742
Work Phone:	301-405-2867

DATE_____

NAME OF PARENT OR
GUARDIAN_____

SIGNATURE OF PARENT OR
GUARDIAN_____

Teacher consent form

Children's Perceived Classroom Peer Support and Correlates: the STORIES Program

I state that I am over 18 years of age, and wish to participate in a program of research being conducted by Dr. Hedwig Teglasi, PhD in the Department of Counseling and Personnel Services at the University of Maryland, College Park.

The procedures involve completing three measures by which I will rate the behavior and adjustment of students in my classroom who have received parental permission to participate in the study. These measures will be completed twice during the course of the school year: during a three week period during the Fall of 2002, and again during a three week period during the Spring of 2003. The measures are:

1. Behavior Assessment Scale for Children
2. Teacher Rating Scale for Bullies, Victims, and Helpers
3. Colorado Childhood Temperament Inventory

All information collected in this study is confidential. Given the need to collect information at various points in time, a file will be established for each student for whom measures are completed, with an assigned identification number. After all information has been collected, the names will be removed. In the meantime, the files will be located in a secure file cabinet in a faculty office at the University of Maryland College Park. This project does not involve any undue risks, and procedures are similar to activities I might otherwise be asked to perform as a professional in the educational field.

This project is not designed to help me personally, but to help the investigator learn more about student adjustment, development, and relationships with classroom peers. I am free to ask questions or to withdraw from participation at any time and without penalty. The University of Maryland does not provide any medical or hospitalization insurance for participants in this research study nor will the University of Maryland provide any compensation for any injury sustained as a result of participation in this research study, except as required by law.

Principal Investigator: Dr. Hedwig Teglasi, PhD
Work Address: Department of Counseling & Personnel Services
3214 Benjamin Building, University of Maryland
College Park MD 20742
Work Phone: 301-405-2867

NAME OF PARTICIPANT_____

SIGNATURE OF PARTICIPANT_____

DATE_____

Appendix B

Student Assent Form

I am going to participate in activities about friendship and getting along with others.

I agree that I will do my best to answer questions about friendship and how I get along with others in my classroom. I know that if I do not want to answer questions, I do not have to, and I can go back to my classroom. If I have any questions, I will ask right away!

Name: _____

Date: _____

Class: _____

Appendix C

Standardized Introductions for Interview 1 and Interview 2

INTERVIEW 1: STANDARDIZED INTRODUCTION

Thank the child for coming. Remind the child that you'll be working together on the activities that the "ladies who came to your class" talked about.

BEFORE STARTING, SAY…

"You and I will be doing lots of different things today! First I'll ask you to tell me some stories, then I'll read some stories to you and ask you some questions, and then I'll asks you to listen to some questions and tell me the answers. But first, just like your parents had to sign a permission form to allow ***you*** to participate, I'd like to get ***your*** permission too!"

Present the assent form and read it to the child. Ask the child if they'd like to do the activities. If the child says "yes", have the child sign their name on the assent form. The examiner may write in the date and teacher's name for the child to save time. (If the child says "no" and does not want to participate, take the child back to his/her classroom.)

BEFORE EACH ACTIVITY, SAY…

"There are no right or wrong answers. Just do your best."

INTERVIEW 2: STANDARDIZED INTRODUCTION

Remind the child of the assent form he/she signed before and make sure the child still wants to participate. If the child does not want to participate, take the child back to class.

BEFORE STARTING, SAY…

"Today I'll be asking you to do lots of different things that will help me to understand what kids are like. I'll be asking you to tell me some things about ***you***, and I'll be asking you to tell me some things about the kids in your class."

Begin sociometric administration.

Appendix D

Interview One and Interview Two Measures

Interview one measures in order of administration

- Social Information Processing & Emotion Understanding (Dodge, Laird, Lochman, & Zelli, 2002)
- Listening Test (Barrett, Huisingh, Zachman, Blagden, & Orman, 1992)
- Thematic Apperception Test (TAT) (Morgan & Murray, 1935)

Interview two measures in order of administration

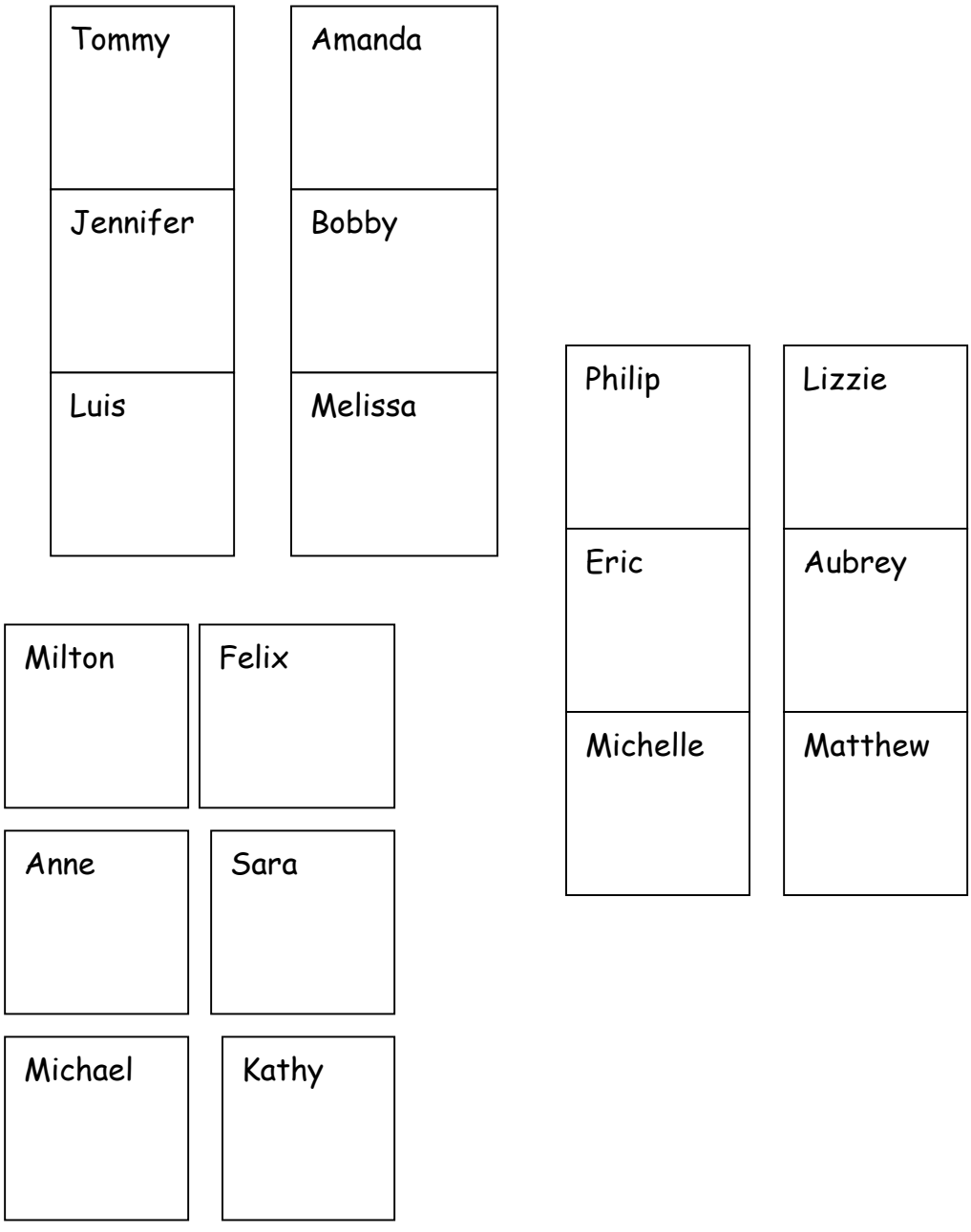
- *Sociometric Peer Rating Procedure**
- Sociometric Peer Nomination Procedure*
- Understanding & Importance of Peer Support Procedure
- Self-Perception Profile for Children (SPPC; Harter, 1985)
- Multidimensional Anxiety Scale for Children – short form (MASC-10; March, 1997)
- Children's Depression Inventory (CDI; Kovacs, 1992)
- Multidimensional Peer Victimization Scale (Mynard & Joseph, 2000)
- Children's Inventory of Anger (ChIA; Nelson & Finch, 2000)

* Measures currently under study

Appendix E

Sample Classroom Layout

TEACHER'S NAME



Appendix F

Sociometric Administration Procedure

PART 1: PEER ACCEPTANCE RATING ADMINISTRATION PROCEDURE

Interviewer:
"This is a drawing of all the kids in your class. Now sometimes there are kids that you may like a lot and kids you may not like so much, but that's okay because everyone is different. I'm going to ask you which kids you like and which you don't like so much. But I don't want you to talk about anything that you and I talk about with anyone else in your class and don't tell anyone in your class who you picked because it's important not to hurt anyone's feelings. It *IS* okay if you want to talk to me, your teacher, or your mom and dad about who you picked."

(Make sure child understands issue of confidentiality before proceeding.)

"Start with the first person here (*point and say the name*). Is this someone that you like a lot? Someone you like a little? Or is this someone you like the least?

(The interviewer continues until the student has given a rating for each student in the class. Comments should be noted on the recording form. Interviewer may probe periodically to find out why the student has chosen to rate a certain way. If child feels "conflicted" about giving certain responses, let the child know that "it's okay to feel that way".)

PART 2: CLASSROOM PEER SOCIAL SUPPORT NOMINATION ADMINISTRATION PROCEDURE

Interviewer:
"Now I'd like to talk to you about all the different *kinds* of kids in your class so that you can help me to get to know what your class is like. Now some kids do nice things while other kids do not so nice things because kids are different, but it's always important for everyone to try to get along. Here is a drawing of *your* class. I'm going to say some things that describe different kinds of kids and the different things that kids may do at school. Look at the drawing to help you remember, and if what I say matches children in your class, say their names. If there's no one who matches what I said, just say, *no one*.

(Give practice items to make sure child understands the procedure.)

Practice Item 1: Kids you like to talk to at school
Practice Item 2: Kids who bring their dog to school

(Once child demonstrates understanding of the procedure, give actual items. Child does not have to pick every child in the class. Note: If the child only gives one person, ask if there are any other children.)

PART 3: UNDERSTANDING & IMPORTANCE OF CLASSROOM PEER SOCIAL SUPPORT ADMINISTRATION PROCEDURE

This portion of the interview should be audiotaped. In addition, take notes on the child's answers.

To start, interviewer asks:
"How have you helped other kids?"
"How have other kids helped you?

I1: "How important is it for someone to help if others were mean to you? Is it very important, kind of important, or not important?"

I2: "How important is it for someone to save you a seat (on the bus, in the cafeteria, etc.)? Very important, kind of important, or not important?

I3: "How important is it for someone to say something to make you feel better if you were upset? Very important, kind of important, or not important?"

I4: "How important is it for someone to ask you for your help with a problem they had? Very important, kind of important, or not important?

CONCLUSION
Interviewer should again stress the issue of confidentiality and make sure the child understands that he/she is not to share responses with other children but should talk to an adult (teacher or parent) if he/she needs to. The interviewer should also ask the child if he/she has any questions about anything discussed during the interview.

Appendix G

Sociometric Administration Form

	CHILD'S NAME	C7: Kids who are your good friends	R3: Kids who try to keep certain people from being in their group when it is time to play or do an activity	P2: Kids who do nice things for others	C6: Kids who you would ask to help you with a problem	C10: Kids who would share their lunch with you if yours was lost	R4: Kids who when they are mad at a person, get even by keeping that person from being in their group of friends	O3: Kids who call other kids mean names	P1: Kids who are good leaders	O4: Kids who say mean things to other kids to insult them or put them down	C4: Kids who you would ask to do something "fun"	V4: Others do mean things to these kids	P3: Kids who help others	V6: Others try to hurt these kids' feelings	P4: Kids who try to cheer up others who are upset or sad about something	C9: Kids who would save you a seat	O5: Kids who tell others they will beat them up unless the kids do what they say	R5: Kids who try to make other kids not like a person by spreading rumors or talking behind their back

Sociometric administration form continued

CHILD'S NAME	O2: Kids who push and shove others around	R1: Kids, who when mad at a person, ignore the person or stop talking to them	R2: Kids who tell friends they will stop liking them unless the friends do what they say	V1: Others make fun of these kids	C8: Kids who would listen carefully to what you have to say	C3: Kids who would ask you to play or do something with them	C11: Kids who are not in your class who are your friends (ask if little support was expressed above)	C5: Kids you would help	V2: Others beat up these kids	C1: Kids who would try to help you if someone was mean to you	V3: Others call these kids names	C2: Kids who would try to make you feel better if you were upset	V5: Others pick on these kids	O1: Kids who hit others	I like these students a lot	I like these kids a little	I like these kids the least

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Appendix H

Perceived Classroom Peer Social Support Scale (Teglasi and Lanier, unpublished)

C1. Kids who would try to help you if someone was mean to you.

C2. Kids who would try to make you feel better if you were upset.

C3. Kids who would ask you to play or do something with them.

C4. Kids you would ask to do something "fun"

C5. Kids you would help

C6. Kids you would ask to help you with a problem

C7. Kids who are your good friends

C8. Kids who would listen carefully to what you have to say

C9. Kids who would save you a seat

C10. Kids who would share their lunch with you if yours was lost

C11. Kids who are not in your class who are your friends (ask if little support was expressed above).

Note: Items "C2, C5, C6, and C7" only are under investigation in the current study.

Appendix I

Procedures Designed to Minimize Risk

The following is a summary of the administration procedures suggested by Bell-Nolan & Wessler, 1998, in order to reduce the risk of adverse impact to the children in the study:

1. Individual administration
2. Active and informed parental consent
3. Child consent (assent) form to be signed after age appropriate explanation of the study and the procedures
4. Explanation of confidentiality (not secrecy) and reasons (sensitivity to others feelings) in context of normalizing preferences. Requesting that responses not be shared with other children though may be discussed with parent or trusted adult.
5. Assurance that the researcher will not share responses with other children
6. Minimal use of negative nominations—nominating for behavioral characteristics rather than broad dislikes.
7. If no friends are mentioned within the class, unlimited nominations of friends of outside class friends.
8. Examiner will come to class to discuss issues of friendship
9. Embedding sociometric procedures with other measures
10. Proactively seeking information about any concerns regarding the testing procedures and reassuring children as appropriate.

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