Students' relationships with peers is fundamental to their mental health. A 3-month study presented here investigated the nature and frequency of students' self-reported recess problems and the degree to which these were concomitant with two often-used measures of children's social competence: peer acceptance and mutual friendships. Seven specific student complaints were investigated, including three problems with peer conflict, three problems with social isolation, and one problem with play enjoyment. Results reveal that certain recess problems were occurring with surprising frequency. Children experienced the seven problems in 3% to 8% of their recesses, with not being allowed to join a group in play being the most frequent recess problem. Significant correlations were reported between recess self-reports and the size of children's friendship networks. Some, but not all, children with frequent recess problems were of low peer acceptance and/or had few identified friends. None of the seven recess problems differed markedly by grade, and few differences were noted by gender, suggesting that there are more similarities than differences in recess problems across age and gender. Correlations exist between the measures of social competence used in developmental research and children's complaints of recess problems. Contains 60 references. (RJM)
Recess reports: Self-identification of students with friendship difficulties

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Abstract

A three-month study investigated the nature and frequency of students' self-reported recess problems and the degree to which these were concomitant with two often-used measures of children's social competence -- peer acceptance and mutual friendships. Seven specific student complaints were investigated including three problems with peer conflict, three problems with social isolation, and one problem with play enjoyment. Children reported these seven problems in 3% to 8% of their recesses. Modest but significant correlations were reported between recess self-reports and the size of children's friendship networks. Some but not all children with frequent recess problems were of low peer acceptance and/or had very few identified friends. Implications for school psychological practice are discussed.
Students' ability to create and sustain effective relationships with peers is fundamental to their mental health (Cantrell & Prinz, 1985; Goodyer, Wright & Altham, 1989; Hartup, 1989; 1991). The social support that they derive from friendships contributes to students' ability to cope with life stress and life transitions (Berndt & Perry, 1986; Cauce, 1986; Cauce, Felner, Primovera, 1982) and sustains their cognitive and social development (Hartup, 1989; 1991). Consequently it is not surprising that the adequacy of current peer relations is a powerful predictor of future socioemotional health (Asher & Hymel, 1986; Goodyer et al., 1989; Putallaz & Gottman, 1982). Students having friendship difficulties that are more frequent and more enduring than those of their peers are at risk as adults to be unemployed or underemployed, lack independence, be overly aggressive and to experience serious mental health disorders (Berndt, 1984; Dodge, 1989; Guralnick, 1986).

Because they act as both early warnings of and preventive interventions for socioemotional disturbance, peer friendships provide a logical focus for preventive models of school mental health (Doll, 1996). Practitioners can use a lack of satisfying friendships as a sign that a student is at psychological risk (Cantrell & Prinz, 1985; Goodyer et al., 1989) or, by facilitating the formation of satisfying friendships, can insulate students against life stresses (Garmezy, 1971; Garmezy & Neuchterlein, 1972). Despite the practical utility of developmental friendship research, direct application of its measurement tools has been difficult because research establishing the pivotal importance of children's friendships has almost always relied on sociometric procedures. Sociometric assessments are not easily adopted by school psychologists
because they have been discouraged by certain school policies (Cook & Iverson, 1993) and are not easily translated into interventions that maintain or enhance students' social competence (Cantrell & Prinz, 1985; Bierman & McCauley, 1987).

In its simplest form, sociometric assessment requires that each student in a class identify classmates that they prefer to play with or have as friends, either by listing preferred students on a page or by rating all students on a 'like to play with' scale (Coie, Dodge, & Coppotelli, 1982). Peer acceptance is determined by ranking students according to the number of nominations they receive (Coie et al., 1982) while mutual friendships are identified whenever choices of two students are reciprocal (Berndt, 1981; Berndt & Perry, 1986). In prior studies using unlimited nomination rates, approximately 4% of children will not be nominated by any classmate while 10% of the class will have no mutual friends (Asher, 1995). While friendship and peer acceptance are overlapping constructs, they are not interchangeable (Parker & Asher, 1989; French, Waas, & Tarver-Behring, 1986). Typically only modest correlations are seen between students' sociometric status and the size of their social network (Cauce, 1986; Feltham, Doyle, Schwartzman, Serbin & Ledingham, 1985; Parker & Asher, 1989). The modesty of these correlations has been attributed to the reciprocal nature of friendships, which requires not only that one be liked but that one also be an accurate judge of who it is that one is liked by (Cauce, 1986; Feltham et al., 1985).

In a common variation of sociometry, classmates are asked to identify those they do not like as friends in addition to making positive nominations, permitting the identification of two
groups of at-risk students: rejected students, who are frequently nominated as disliked and rarely
chosen as play partners, and neglected students, who are omitted from both lists (Asher, Oden, &
Gottman, 1977; Asher & Renshaw, 1981). Similarly, mutual friendships can be analyzed in
different ways, with students’ friendship networks described in terms of size (i.e. the number of
friendship pairs the student is part of); constriction (i.e. the degree to which the student’s friends
are also each other’s friends); and supportiveness (the degree to which a network confirms and
supports a student; Berndt, 1981; Berndt & Perry, 1986; Bukowski & Newcomb, 1984; Cauce,
1986). Other variations on sociometry include asking classmates to nominate students for
particular characteristics (e.g. Which students are good at getting the groups work done?;
Wentzel, 1991), asking classmates to nominate students for parts in a hypothetical class play
(Masten, Morrison, & Pelligrini, 1985), limiting the number of nominations each student can
make to three (Benenson, 1990), or embedding nominations in other classroom activities such as
‘circle of friends’ activities (Forest & Lusthaus, 1990). (A comprehensive history of school
applications of sociometry can be found in Barclay, 1992).

Sociometry’s requirement that students evaluate the likability of classmates is a
controversial practice that has frequently come under fire in some school districts (Bierman &
McCaugley, 1987; Cantrell & Prinz, 1985; Crick & Ladd, 1989; Doll, 1996). Critics claim that
peer nominations, and in particular negative nominations, can cause students to view certain peers
more negatively (Bell-Dolan, Foster, & Sikora, 1989) and violate school norms prohibiting
derogatory comments about classmates (Deno, Mirkin, Robinson, & Evans, 1980). Despite
convincing evidence that peer evaluations don't alter ongoing peer interactions (Bell-Dolan et al., 1989; Hayvren & Hymel, 1984), the practices of constructing friendship networks or conducting sociometric assessments are likely to be prohibited by parents or many school administrators (Cook & Iverson, 1993). Additionally, the contributions of sociometric assessment to clinical diagnoses and intervention is unclear. As an empirically derived construct, low sociometric status isn't necessarily equivalent to the clinical judgments of social maladjustment that have traditionally been used in mental health diagnoses (American Psychiatric Association, 1987; Cantrell & Prinz, 1985) and provides relatively little information about how mental health interventions should proceed or what their immediate purpose should be (Bierman & McCauley, 1987).

The purpose of this study was to clarify the link between peer acceptance and mutual friendships and applied school psychological practice by describing these measures' relationship to a more common school index of disturbed peer relations: student reports of recess problems. A three-month investigation described the nature and frequency of students' self-reported recess problems and the degree to which these were concomitant with low acceptance and diminished numbers of friends. Seven specific student complaints were investigated including three problems describing peer conflict (being in fights, being in arguments, being teased), three problems describing social isolation (not being allowed to join a group, losing a friend, playing alone), and one describing play enjoyment. These specific complaints were targeted because of their identification as important correlates of sociometric status or friendship networks.
Conflict problems. Three forms of peer conflict were examined within this study: physical fighting, verbal fighting or arguing, and teasing or name-calling. The relationship between these forms of peer conflict and sociometric assessments of social competence is confused by contradictory findings. On the one hand, peer conflict has emerged as an prominent predictor of both low sociometric status and unsatisfactory friendships. Observational studies have repeatedly found that physical fighting is more common among sociometrically rejected elementary students than accepted students (Berndt, 1984; Dodge, 1989; Dubow, 1988; Guralnick, 1986; Shantz & Shantz, 1985) and with arguing, teasing and subtler forms of verbal aggression becoming more prominent in early adolescence (Asnarow, 1983; Carlson, Lahey & Neeper, 1984; Coie et al., 1982; French & Waas, 1985). In contrast, sociometrically neglected students acquiesce in the face of physical fighting (Carlson, et al., 1984; Asher & Coie, 1990) and are hypersensitive to arguing and teasing by other students (Asher & Coie, 1990). Both rejected and neglected students report less success in resolving the conflicts effectively than accepted students (Parker & Asher, 1989; Shantz & Shantz, 1985). An immediate conclusion would be that arguing, fighting and teasing mitigate against effective friendships, but this may not be the case. Other evidence has established that social status is based primarily on peers' positive social qualities regardless of their aggressiveness (Berndt & Perry, 1986; Bierman & McCauley, 1987; Bukowski & Newcomb, 1984; Dubow, 1988). Moreover, friendship network research has shown that students engage in more conflict within their friendships than outside of them (Bukowski & Newcomb, 1984; Hartup, Glazer, & Charlesworth, 1967) and that friends resolve
conflicts with each other more successfully than with non-friends (Berndt & Das, 1987; Berndt & Perry, 1986). Thus, peer aggression appears to be problematic for all children but children with low peer acceptance have more difficulty handling it in ways that don't disrupt their relationships.

Social isolation. The hallmarks of social isolation on recess playgrounds include having to play alone, not being allowed to join other groups at play, and losing a friend. When such social isolation is a dominant characteristic of neglected students, it is an apparent consequence of their tendency to be passive and withdrawn (French & Tyne, 1982). Although described as likable (Rubin, Hymel, LeMare, & Rowden, 1989), neglected students are slow to initiate interactions with peers (Carlson, et al., 1984; Coie et al., 1982), reluctant to respond to invitations to play (Coie et al., 1982), and are less often friendly and prosocial (Asher & Hymel, 1986; Carlson et al., 1984). Thus, theirs is a passive form of isolation, resulting in large part from their own failure to insert themselves into the social activities of their peers. Rejected students are likely, instead, to be overtly excluded by their peers. While rejected students have more friends and are more interested in friends than neglected students (Dodge, 1983, Rizzo, 1988), they often disrupt the play of others and so, as unwelcome play partners, they tend to move frequently from peer to peer in search of a playmate at recess (Dodge, 1983). While most rejected and neglected students have at least one friend (Parker & Asher, 1989; Rizzo, 1988), there is some evidence to suggest that their friendships are less supportive and more transitory than typical peer relationships (Asher, 1995).
Play enjoyment. Students' enjoyment of play is one sign that their friendships are supportive. Rejected children's friendships tend to be less helpful and less effective than those of sociometrically accepted children (Parker & Asher, 1989) and they describe more loneliness and dissatisfaction with their social relationships than other sociometrically-defined groups (Asher, 1985; Asher & Hymel, 1986). Enjoyability can also be mediated by student's expectations of play. Whereas rejected students appear to derive more enjoyment from winning than affiliation, accepted students appear to be most interested in the affiliation that accompanies the game (Renshaw & Asher, 1983). Gender differences in play preferences also impact enjoyability: boys prefer friends with attributes that build acceptance while girls prefer friends that support intimacy (Benenson, 1990).

Investigations describing children without friends have identified diverse factors that might account for diminished social competency (Doll, 1996). Specifically, evidence suggests that some children with frequent social problems may have a limited or maladaptive repertoire of social behaviors that disrupts their interactions with peers (Dodge, 1989; Parker & Asher, 1989). Other children may have social cognitive limitations to the degree that they are unable to understand and make good decisions in the face of social dilemmas (Gettinger, Doll & Salmon, 1994; Renshaw & Asher, 1983). In certain cases, socially-wary children will chose to isolate themselves from peers to avoid intense feelings of social anxiety, although the remoteness that such children project may lead peers to actively exclude them in the future (Rubin & Asendorpf, 1993; Engfer, 1993). There is evidence that age and experience enhances the acquisition of each of these factors: social
behaviors become more skilled and successful (Hartup, 1989), social understanding becomes
more complex (Selman & Shultz, 1989), and social confidence grows. Thus, it is reasonable to
hypothesize that children’s friendship problems will become less frequent with age, as they
become more skilled at being social and understanding social actions of others.

By comparing student reports of recess problems with their sociometric status and
friendship networks, this study represents an attempt to connect developmental research on
children's social competence to daily practices of school psychologists (Bierman & McCauley,
1987). Previous attempts to assess social risk by focusing on social behaviors have not been
successful. The correlations that exist between sociometric acceptance and social behaviors have
been quite modest (Deno et al., 1980; Hartup, 1970) and consequently many students
demonstrating behaviors correlated with low status aren't sociometrically rejected or neglected.
This study differs from prior investigations in that recess problems are reported as they are
perceived by the children themselves. Self-reports are distinctive in two respects: They are
authentic replications of the social complaints teachers receive on a daily basis and they merge the
child's judgments about social events with their descriptions of what occurred. As the previous
discussion of social research demonstrates, children's contextually-determined evaluation of social
experiences may be more relevant to their mental health than the actual events themselves.
Previous research investigating behavioral correlates of sociometric status utilized absolute
frequencies of social behaviors. However, there is good reason to believe that the nature and
frequency of children's social difficulties will diminish with ages. Consequently, this study first
identified the local norms for each recess problem, and then identified children whose problems were exceptional relative to those norms.

Two hypotheses guided this investigation: First, it was hypothesized students with low-sociometric status and limited numbers of friends would report more frequent recess problems. Second, it was hypothesized that students would report more recess problems in the younger grades, when the tasks of social role-taking and social problem solving were more daunting, and less frequent problems in the later grades when social reasoning and perspective taking were more developed.

Method

Subjects.

All third, fourth and fifth grade classrooms in two inner city schools were invited to participate in this study. Sixteen of the seventeen classrooms accepted the initial invitation. Subsequently, two classrooms were dropped from the study because fewer than 80% of the students enrolled had permission to participate. An additional three classrooms were excluded because insufficient Recess Reports had been collected for the final analyses. The results reported here are based on the remaining eleven classrooms comprising 237 elementary school children (68% of the third, fourth, and fifth graders in the two schools). The sample included 87 third-graders, 63 fourth-graders and 87 fifth graders including 130 boys (55%) and 107 girls (45%).
School district materials describe the community as an economically stressed neighborhood dominated by industry, including manufacturing plants, oil refineries, and five Superfund sites. The median family income in the two schools was $15,400 and 68% of the students qualified for free lunch. The community’s ethnicity was predominantly Hispanic and Caucasian, with an ethnic enrollment in these two schools of 45% Hispanic, 50% Caucasian, and 5% other minority groups. Nine percent of the subjects spoke only Spanish and completed study activities with the assistance of their bilingual teachers.

Measures.

**Sociometric nominations.** Sociometric nominations were collected using a ‘friends in circles’ form, a variation on an unlimited list procedure in which students listed their close friends in an inner circle of the form, and listed other friends in an adjacent circle. From these nominations, peer acceptance was determined by counting the number of times each student was nominated as ‘friend’ or ‘close friend’ by a classmate. Reciprocal friendships were identified whenever two students each listed each other as a friend or close friend.

**Recess Report.** Student reports of recess problems were collected using a seven-item report form. Items included: having a rotten time; having to play alone; having a bad argument; not being allowed to join others in their games; being made fun of, called names or lied about; getting in fights (hitting, pushing and shoving) with others; and being told others wouldn’t be their friend anymore. So that items did not predispose students to report problems, each item included a box describing a problem (“I had a rotten time”) and another box describing its opposite (“I had
a great time playing). To respond, students checked the box containing the problem statement, the box containing the not-problem statement, or checked in-between the two boxes. To balance order effects, four of the items listed the problem statement on the left side and three listed the problem statement on the right side of the page.

Procedure.

Consent forms were sent home to parents with students of every third through fifth grade class in the two schools. Follow-up telephone calls were made to those parents who did not return permission slips, until at least 80% of each classroom’s enrollment had permission to complete the study. Because students are likely to be misclassified if class participation in sociometric nominations drops below 80% (Bichard, Allen, Walker, & McMahon, 1988; Crick & Ladd, 1989), two classrooms with lesser participation rates were dropped from the study. For the remaining classrooms, signed consent forms authorizing participation were returned by 92% of those enrolled.

Sociometric nominations were collected for each class during Weeks 1 and 2 of the study using a ‘Friends in Circles’ presentation. Students were introduced to the topic of friendships with a series of comic strips. Then, they discussed how they knew when two students were friends. Next, completion of the ‘Friends in Circles’ form was demonstrated. The form consisted of four concentric circles drawn on a page. Students were instructed to write their own name in the center circle. In the next circle, they listed names of their close friends. In the third circle, they listed names of other friends. The fourth circle was labeled ‘classmates’ and students were
told they could write the names of additional students if they chose. While students completed their 'Friends in Circles' form, an overhead transparency listing the names of all students in the class was projected on the front wall.

As part of that same presentation, the Recess Report form was completed for the first time by each student in the class. For each of the seven items, students were told to check the box that best described the recess they had earlier that same day: the box describing the problem, the box describing no problem, or the in-between box. Subsequent Recess Reports were collected by classroom teacher after at least eight more recess periods chosen at random during Weeks 3 through 10 of the study. In each case, the reports were completed immediately after their class came in from the recess and before beginning any instructional activities. So that students didn't monitor their recess more closely on reporting days, teachers were cautioned not to alert the class in advance that they would be reporting on that day's recess. Three classrooms were dropped from the study at this point because insufficient Recess Reports had been collected from at least a quarter of the class.

Analyses. For each subject in the study, data consisted of the number of nominations as a friend received from classmates, the number of mutual friendships identified, and the frequency with which problems were reported after nine different recess periods. To summarize data from the Recess Reports, each item on the page was scored dichotomously as '1' (Problem box checked) or '0' (No problem or in-between box checked). Then, prevalence scores were
computed by averaging the item scores across all nine Recess Reports. These averages represented the proportion of recesses during which that problem occurred for that student.

To analyze the data, the mean number of peer nominations and mutual friendships identified for students was computed together with the standard deviation. A two-way (grade x gender) analysis of variance was used to check these for grade and gender effects. Sheffe post-hoc comparisons were then used to identify the differences responsible for any significant grade effects. Similarly, the mean prevalence score for each of the seven recess problems was computed, together with the standard deviation. Next, a rotated factor analysis (Varimax Rotation with one extraction) was used to examine the factor structure of the seven recess problem prevalence scores. Prevalence scores comprising each factor were summed to create factor scores, and grade and gender means and standard deviations were computed for factor scores. Two-way (grade x gender) analysis of variance was used to check the Recess Reports for grade and gender effects. Correlations were used to examine the relationship between peer nominations, mutual friendships, and Recess Reports. Finally, to examine the degree to which both procedures might identify the same students as being at-risk, subject-by-subject comparisons were made between students identified as having unusually low numbers of peer nominations and mutual friendships, and those having unusually high rates of recess problems.

Results

Results of the ‘Friends in Circles’ procedure are reported by grade and gender in Table 1. Results show that the typical student was nominated by between four and eight classmates as either a
'friend' or 'close friend'. A two-way analysis of variance revealed both grade and gender effects in the total number of peer nominations (F grade (2 df) = 9.97, p < .001; F gender (1 df) = 9.96; p < .01). Post-hoc comparisons were conducted using the Sheffe Procedures and revealed that boys were nominated by more classmates in all grades, and fifth-graders were nominated by more classmates than either of the younger grades. Inspection of individual student data shows that only five students had not been nominated as a 'friend' or 'close friend' by any classmate. This represents two percent of the total student population, a smaller proportion than prior sociometric studies using unlimited nomination techniques (Asher & Renshaw, 1981; Parker & Asher, 1989), and suggests that these students may be somewhat more inclusive in their social climate.
When mutual friendship choices were also analyzed, between three and five mutual friendship choices were identified for the typical student. A two-way analysis of variance showed no significant gender effects in the number of mutual friendships identified, but did yield a significant grade effect (F grade (2 df) = 10.74, p < .001); post-hoc comparisons showed that more mutual friends were identified for Fifth graders than for Third Graders. (See Table 1.)

The proportion of recesses during which students reported each recess problem is described in Table 2. One problem was relatively frequent; ‘others wouldn’t let me play in their game’ occurred in 8 percent of all recess periods. Alternatively, losing a friend and getting in fights occurred in approximately 3 percent of all recess periods. The remaining problems occurred in 4 or 5 percent of all recesses.

The factor analysis of the seven recess problems is described in Table 3. The solution shows two clear factors. The first factor is defined by three items describing problems being included in others’ play, with a fourth item describing ‘having a rotten time’. Thus, Factor I was
titled 'Inclusion Problems'. Factor II is defined by three items describing problems with fighting, arguing or teasing. Thus, Factor II was titled ‘Conflict problems’.

A simple ‘Inclusion Problems’ score was computed by summing the prevalence scores for the four items comprising that factor, while a simple ‘Conflict Problems’ score was similarly computed by summing prevalence scores for the three items comprising that factor. (Because the two sums represent different numbers of items, these two scores were not directly comparable.) Means and standard deviations for the Inclusion and Conflict scores are included in Table 4. Two-way (grade x gender) analysis of variance was conducted for each score, and revealed no significant grade or gender effects in either factor.

Correlations between the recess problems, mutual friendships and peer nominations, described in Table 5, show modest but significant relationships between the Inclusion Problems score and the number of Peer Nominations and Mutual Friendships identified for students. Similarly, small but significant correlations are reported between Mutual Friendships and three of the four Inclusion problems. By way of contrast, a relationship was seen between students' peer
nominations and only one recess problem: Having to play alone. There were no significant correlations between the Conflict Problems score or individual Conflict items and either Peer Nominations or Mutual Friendships.

To examine more closely the relationships of recess problems with Mutual Friendships, 8 subjects were identified whose Conflict Problem scores were more than two standard deviations above the mean; The number of mutual friendships identified for these students ranged from 0 to 6, with a median of 4 mutual friends. Another 12 students were identified whose Inclusion problem scores were more than two standard deviations above the mean; The number of mutual friendships identified for these students ranged from 0 to 5, with a median of 2 friends. Three of the 12 students had no mutual friends identified. There were no student with excessively high scores in both Inclusion Problems and Conflict Problems. At the same time, there were 22 students for whom no mutual friendships were identified, but only four of these (18 %) reported excessively high Conflict or Inclusion problems. Thus, the correspondence between students identified as at risk by Recess Reports and those identified as at risk through friendship analyses is poor.

Discussion
Children's self-reports established that certain recess problems were occurring with surprising frequency. For example, not being allowed to join a group in play, the most frequent recess problem, occurred in 8% of all recesses. If this rate is extrapolated across the approximately 180 recess periods that most students have in a school year, a typical child could expect to be excluded from classmates' games at least 14 times a year. Similarly, children in these two schools reported problems with arguing in 6% of recesses, having to play alone in 5% of recesses, being teased in 4% of recesses, and fighting in 3% of recesses. As results of the peer nominations suggested this was a more cohesive group of children than might typically be the case, it is possible that other school playgrounds might show even more frequent recess problems. It is clear, then, that no single occurrence of any of the recess problems can be considered diagnostic of social risk, given the frequency with which these occurred in typical children. This is not to say that these did not represent problems for children; rather, their occurrence was not necessarily evidence of social incompetence or risk unless it was uncommonly frequent.

It would be tempting to suggest that these frequent recess problems are evidence of children's less-than-mature skills in social reasoning and social perspective-taking (Dodge, 1989; Hartup, 1970). However, if this had been the case, children's recess problems should have been lower in fifth grade, as students' age and social-cognitive competence increased. Instead, none of the seven recess problems differed markedly by grade, and few differences were noted by gender. Thus, these results fail to support the hypothesized relationship between grade level and frequency of recess problems and suggest, instead, that there are more similarities than differences in recess
problems across age and gender. It is possible that age-related differences might emerge in subsequent research if the age-span were longer.

In contrast, small but significant grade and gender differences were noted in the sociometric data. The size of friendship networks was somewhat larger among fifth graders than younger children, and the number of peer nominations received appeared to be somewhat larger for boys than girls. Despite their significance, the size of these differences was small and insufficient to justify differential intervention practices by grade and gender.

One of the most intriguing findings of this study was the identification of two discrete classes of recess problems -- problems involving peer conflict and problems involving exclusion. Not only did these emerge as distinct factors of the Recess Report, but the two demonstrated very different relationships with the sociometric measures. In particular, inclusion problems acted as moderate but consistent predictors of both peer acceptance and mutual friendships, while children's reports of conflict problems were unrelated to either. Moreover, children's reports of play enjoyment were related principally to the absence of inclusion problems. Such results imply that the degree to which a child is included in classmates' play may be far more relevant to both long-term social competence and immediate social enjoyment than the number of peer conflicts they become entangled in. Moreover, the results suggest that the extensive adult efforts to prevent and mediate peer conflicts may have relatively less impact on students' overall social adjustment compared with time spent fostering inclusive peer cultures. While inconsistent with popular beliefs about friendships and fighting, these results confirm prior research demonstrating
that sociometric status was not strongly affected by student aggressiveness (Berndt & Perry, 1986; Bierman & McCauley, 1987).

Even though the number of mutual friendships identified for a child was consistently related to self-reported recess problems, peer acceptance was not. Thus, while well-established as a predictor of long-term social risk, these results suggest that peer acceptance does not hold the same power over the immediate experience of peer difficulties. The disparity between these two findings raises an intriguing question: What aspects of friendship networks link them more closely to recess problems than peer acceptance? One obvious possibility lies in the mutuality of friendship choices, requiring that children not only be named as friends by peers, but also select those very same peers to nominate. Children for whom no friendships are identified may be those with poor peer acceptance (and so, who are rarely nominated), or those who seek friendships with peers who do not nominate them. In that recess problems appear to be most firmly linked to these reciprocal relationships, then solutions to these ought to reflect this reciprocity by focusing simultaneously on improving peers' acceptance of a student and prodding the student to take more responsibility for creating and fostering friendships.

While this study established relationships between Recess Reports and traditional sociometric measures of risk, these relationships were not sufficiently strong to permit either measure to substitute for the other. Indeed, most of the children with inordinate numbers of recess problems would not have been identified through sociometric techniques and, similarly, those children with very limited sociometric status would not have been identified using Recess
Reports. Instead, the two procedures appear to tap into related but different dimensions of social competence. One might speculate that Recess Reports capture the immediate distress of a difficult recess while traditional sociometric procedures assess distress that emerges and is expressed over a longer period of time. Alternatively, it is possible that factors other than frequency of the friendship problems would show a stronger relationship with sociometric procedures. For example, it may be the degree to which peer conflicts are satisfactorily resolved, rather than the frequency with which they occur, that correlates with peer acceptance.

The very modest success of self-reported problems in identifying children with friendship difficulties raises the possibility that students might also play self-determined roles in other aspects of friendship interventions. For example, children might participate in choosing intervention goals or strategies. In other domains, elementary and middle school students have been demonstrated to be capable of making autonomous decisions about their own intervention needs (Bandura, 1982; Deci, Schwartz, Sheinman, & Ryan, 1981; Garner, 1987; Weithorn & Campbell, 1982). If elementary age children can make appropriate requests for instructional support after assessing their own task performance (Nelson-Le Gall, Kratzer, Jones, & DeCooke, 1990), it may also be effective to ask even very young children to make decisions about their social and emotional needs.

The relevance of this study to daily practices of school psychologist cannot be immediate. The rates of recess problems may not be generalizable to other elementary school playgrounds, given the diverse and urban nature of these schools. Future studies will need to replicate these
results with additional, representative samples in order to clarify relationships between recess problems and development. It is reasonable to expect factors such as student transience, ethnic or economic diversity, or cultural values might alter the typical ways that children behave with one another on school playgrounds. At the same time, these results are sufficient to establish that relationships exist between the measures of social competence used in developmental research and children's complaints of recess problems, a naturally occurring index of social adjustment that is readily available to teachers and school psychologists. Moreover, these results demonstrate the importance of interpreting children's recess complaints with reference to the normative rates of such recess problems within the school. Finally, this study demonstrates that the relationships between recess complaints and developmental measures of social adjustment are neither strong nor simple.
References


withdrawal, inhibition and shyness in childhood (pp. 3-17). Hillsdale, NJ: Lawrence Erlbaum Associates.


Table 1: Mutual Friendships and Peer Acceptance by Grade and Gender

<table>
<thead>
<tr>
<th>GRADE</th>
<th>MUTUAL FRIENDSHIPS</th>
<th>PEER ACCEPTANCE</th>
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<tr>
<td></td>
<td>Male Mean</td>
<td>SD</td>
</tr>
<tr>
<td>3</td>
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<td>2.75</td>
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<td>ALL</td>
<td>3.82</td>
<td>2.40</td>
</tr>
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</table>

F gender (1 df) = 3.53, ns  
F grade (2 df) = 10.74 **

F gender (1 df) = 9.96 *  
F grade (2 df) = 9.97 **

* p < .01  
** p < .001
Table 2: Proportion of Recesses During Which Each Recess Problem Occurred

<table>
<thead>
<tr>
<th>Recess Problems</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getting into an argument</td>
<td>.06</td>
<td>.09</td>
<td>.00</td>
<td>.56</td>
</tr>
<tr>
<td>Being teased</td>
<td>.04</td>
<td>.08</td>
<td>.00</td>
<td>.44</td>
</tr>
<tr>
<td>Getting in a fight</td>
<td>.03</td>
<td>.08</td>
<td>.00</td>
<td>.67</td>
</tr>
<tr>
<td>Losing a friend</td>
<td>.03</td>
<td>.07</td>
<td>.00</td>
<td>.67</td>
</tr>
<tr>
<td>Having a rotten time</td>
<td>.05</td>
<td>.10</td>
<td>.00</td>
<td>.67</td>
</tr>
<tr>
<td>Having to play alone</td>
<td>.05</td>
<td>.10</td>
<td>.00</td>
<td>.67</td>
</tr>
<tr>
<td>Not being allowed to join</td>
<td>.08</td>
<td>.11</td>
<td>.00</td>
<td>.56</td>
</tr>
</tbody>
</table>
Table 3: Factor analysis of Recess Problems

<table>
<thead>
<tr>
<th></th>
<th>Unrotated</th>
<th></th>
<th>Rotated using varimax rotation with one extraction, Kaiser normalization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F1</td>
<td>F2</td>
<td>Communality</td>
</tr>
<tr>
<td>Had bad arguments</td>
<td>.595</td>
<td>.487</td>
<td>.591</td>
</tr>
<tr>
<td>Was made fun of</td>
<td>.649</td>
<td>.406</td>
<td>.586</td>
</tr>
<tr>
<td>Got into fights</td>
<td>.579</td>
<td>.619</td>
<td>.718</td>
</tr>
<tr>
<td>Lost a friend</td>
<td>.464</td>
<td>-.120</td>
<td>.229</td>
</tr>
<tr>
<td>Had a rotten time</td>
<td>.655</td>
<td>-.410</td>
<td>.597</td>
</tr>
<tr>
<td>Had to play alone</td>
<td>.655</td>
<td>-.583</td>
<td>.769</td>
</tr>
<tr>
<td>Others wouldn't let me join</td>
<td>.559</td>
<td>-.367</td>
<td>.447</td>
</tr>
</tbody>
</table>

37

38
<table>
<thead>
<tr>
<th>GRADE</th>
<th>SUM 3 CONFLICT PROBLEMS</th>
<th></th>
<th>SUM 4 INCLUSION PROBLEMS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>3</td>
<td>.16</td>
<td>.22</td>
<td>.10</td>
<td>.21</td>
</tr>
<tr>
<td>4</td>
<td>.16</td>
<td>.28</td>
<td>.10</td>
<td>.14</td>
</tr>
<tr>
<td>5</td>
<td>.15</td>
<td>.16</td>
<td>.10</td>
<td>.17</td>
</tr>
<tr>
<td>ALL</td>
<td>.15</td>
<td>.22</td>
<td>.10</td>
<td>.17</td>
</tr>
</tbody>
</table>

F gender (1 df) = 4.12, ns
F grade (2 df) = .06, ns
Table 5: Correlations among recess problems, and between recess problems, friendships, and peer acceptance

<table>
<thead>
<tr>
<th>Recess Problems</th>
<th>Mutual Friendship</th>
<th>Peer Aomination</th>
<th>Recess Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>s</td>
<td>s</td>
<td>Argue</td>
</tr>
<tr>
<td>Getting into an argument</td>
<td>-0.09</td>
<td>-0.05</td>
<td></td>
</tr>
<tr>
<td>Being teased</td>
<td>-0.09</td>
<td>-0.07</td>
<td></td>
</tr>
<tr>
<td>Getting in a fight</td>
<td>-0.03</td>
<td>-0.02</td>
<td></td>
</tr>
<tr>
<td>SUM CONFLICT PROBLEMS</td>
<td>-0.09</td>
<td>-0.05</td>
<td></td>
</tr>
<tr>
<td>Losing a friend</td>
<td>-0.11</td>
<td>-0.13</td>
<td>0.21*</td>
</tr>
<tr>
<td>Having a rotten time</td>
<td>-0.27**</td>
<td>-0.15</td>
<td>0.25**</td>
</tr>
<tr>
<td>Having to play alone</td>
<td>-0.35**</td>
<td>-0.31**</td>
<td>0.16*</td>
</tr>
<tr>
<td>Not being allowed to join</td>
<td>-0.17*</td>
<td>-0.07</td>
<td>0.08</td>
</tr>
<tr>
<td>SUM INCLUSION PROBLEMS</td>
<td>-0.33**</td>
<td>-0.22**</td>
<td></td>
</tr>
</tbody>
</table>

* p ≤ .01  ** p ≤ .001
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</tr>
</thead>
<tbody>
<tr>
<td>Author(s):</td>
<td>Beth Doll and Patrick Murphy</td>
</tr>
</tbody>
</table>

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</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

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