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AUTHOR McIntosh, Ruth; Vaughn, Sharon
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ABSTRACT

This study examined the aggressive behaviors of children through peer ratings to teacher ratings of problem behaviors and social skills and peer ratings of friendship. Peer data are valid measures and may be more accurate than teacher or self measures because peers are more likely to be present when aggression occurs. This study examines a peer rating scale of childhood aggression (CAPERS) and its relation to peer acceptance. Items for the rating scale were selected because of their specificity to two subtypes of aggression. Sex differences on the items on the peer rating scale of aggression also are examined. The hypothesis that sex differences would consistently exist was not confirmed. Aggressive behaviors as rated by peers in first and second grade children were stable across a one year span. Aggressive behaviors in children appeared stable across time and classrooms, and were linked to other maladaptive behaviors. Aggressive peer ratings also were related to teacher measures of conduct disorders and peer ratings of children who were least likely to be chosen as friends. Although it was expected that different dimensions of childhood aggression would be distinguished in children's peer groups, this finding was not supported in the results of this study. The study concluded that the CAPERS proved to be a reliable assessment of aggressive behavior for students in first and second grade, across gender and ethnic diversity with consistent and predictable relations to peer acceptance. However, the study did not support a multiple factor model of childhood aggression. (DK)

Peer Ratings of Aggression:
Relation to Social Skills, Behavior Problems, and Friendships

Ruth McIntosh, Ph.D.

Sharon Vaughn, Ph.D.

University of Miami

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Abstract

This study examined the aggressive behaviors of children through peer ratings to teacher ratings of problem behaviors and social skills and peer ratings of friendship. A peer rating scale of aggressive behavior items (CAPERS) was developed, then evaluated for reliability, item intercorrelations, and factor structure. All items highly intercorrelated. Results of principal axis analyses indicated items converging as a single factor structure. The hypothesis that sex differences would consistently exist was not confirmed. Aggressive behaviors as rated by peers in first and second grade children appear stable across a one year span. Aggressive peer ratings are also related to teacher measures of conduct disorders and peer ratings of children who are least likely to be chosen as friends. Although it was expected that different dimensions of childhood aggression would be distinguished in children's peer groups, this finding was not supported in the results of this study.

Aggression is related to social rejection by peers (Coie, Dodge, & Coppotelli, 1982), is stable over time (Olweus, 1979), and is linked to other maladaptive behaviors including delinquency (Kupersmidt, 1983), young adult antisocial behavior (Roff, Sells, & Golden, 1972), criminality (Roff & Wirt, 1984), and adult psychopathology (Robins, 1966; 1974). When compared to children who are not aggressive, aggressive children experience more school adjustment and learning problems (Griffin, 1987; Ledingham & Schwartzman, 1984; Westman. Rice, & Bermann, 1967) and are twice as likely to repeat a grade in high school and to drop out of school (Havighurst, Bowman, Liddle, Matthews, & Pierce, 1962). Aggressive children are frequently rejected by their peers (Bierman, 1986; Coie & Kupersmidt, 1983; Perry, Kusel, & Perry, 1988), experience poor interpersonal relationships with family members (Cairns, Cairns, Neckerman, Ferguson, & Gariepy, 1989; Milich & Loney, 1979), and evidence poor personal adjustment (Lerner, Hertzog, Hooker, Hassibi, & Thomas, 1988). Aggressive behaviors in childhood are predictive of later juvenile delinquency (Roff & Sells, 1985; Roff & Wirt, 1985), young adult antisocial behavior and criminality (Eron, Walder, Huesmann, Lefkowitz, 1974; Roff & Wirt, 1984), and mental health referral (Lefkowitz, Eron, Walder, & Huesmann, 1977; Huesmann, Rowell, Leonard, Lefkowitz, & Walder, 1984).

Valid and accurate assessments of aggression in children are necessary for the identification of children for intervention.

Within this context, identification of distinctive behaviors among aggressive children would benefit the intervention process, particularly if individual or group differences could be identified.

Past research on adult human and animal aggression has identified two distinct types of aggressive behavior, a hostile angry reaction to threat or frustration and a second behavior type prompted by anticipated benefits. Aggressive children have been shown to inaccurately interpret the intent of others and to hostilely and angrily respond to perceived threats (Dodge, Murphy, & Buchsbaum, 1984; Dodge & Newman, 1981; Dodge, Pettit, McClaskey, & Brown, 1986). Other studies (Olweus, 1977; 1978; Rule, Nesdale, & McAra, 1974) have shown that threat is not the only mediator of aggressive behavior for some children, but rather aggression is used as a means to reach a specific goal or reward.

Dodge and Coie (1987) examined the validity of two types of childhood aggressive behavior through teacher ratings, peer nominations, and observations. That study reported aggressive behavior items loading on one factor, however certain aggressive behavior items consistently loaded on a second factor identified as proactive, or instrumental aggression.

However, caution interpreting Dodge and Coie's conclusions as to the validity of two subtypes of children's aggression is needed. Over half of the rejected-aggressive boys displayed high rates of both reactive and proactive aggressive behaviors. Of

the 339 subjects, only 7 and 11 were found to be proactive and reactive respectively, based on teacher ratings for identification. All subjects were Black males. Items on both the teacher rating scale and the peer nomination subscales highly intercorrelated. The second factor, proactive aggression, reported by Dodge and Coie for both the teacher rating scale and peer nomination subscales did not have eigenvalues larger than 1.0. A further exploration of subtypes of childhood aggression is indicated. This study explores subtyping of childhood aggression using different assessments and with data collected from a more heterogeneous population of subjects.

Assessments of childhood aggression have been traditionally obtained through direct observation, referral, and teacher or parent nomination or checklists of problem behaviors. Another method of obtaining information on children is through peers. Peer data are valid measures (Cowen, Pederson, Babigian, Izzo, & Trost, 1973) and may be more accurate than teacher or self measures (Pollack, Gilmore, Stewart, & Mattison, 1989) because peers are more likely to be present when aggression occurs (Olweus, 1984). Peer nominations have traditionally been used to assess peers' perceptions of aggressive behaviors. Whereas peer nomination information provides valuable peer assessments of childhood behaviors, this method does not necessarily provide a measure of each child by each child in the context of the group. Peer ratings allow a rating of each child by each child in the group.

Peer ratings of behaviors identified relating to specific types of aggression could be used to examine the existence of subtypes of childhood aggression as well as provide additional information on childhood aggression for identification and intervention. This study examines a peer rating scale of childhood aggression and its relation to peer acceptance. Items for the rating scale were selected because of their specificity to two subtypes of aggression (Dodge & Coie, 1987).

A social-cognitive approach to aggression in children has been proposed by Dodge (Dodge, 1986; Dodge et al., 1986; Dodge & Coie, 1987; Dodge & Somberg, 1987). Dodge describes the processing steps necessary for socially competent behavior by children as: 1) encoding of relevant cues, 2) accurate interpretation of cues, 3) accessing competent behavioral responses of cues, 4) evaluating responses, and 5) selecting and enacting of response.

> "Some types of inefficient and inaccurate processing will lead a child to retaliate aggressively in response to conflicts and provocations by peers. A child who interprets a provocator's intention as hostile will likely feel justified in getting angry and in retaliating aggressively. If the interpretation is inaccurate, the aggressive retaliation will be inappropriate; however, the child will not understand that others view this behavior as inappropriate because he or she has viewed the behavior as a justified response to a hostile provocation. Our research has demonstrated that children who have a tendency to make inaccurate interpretations, particularly ones of presumed hostility, are likely to display high rates of reactive aggression during free play with peers and are likely to be rated by their teachers as highly reactively aggressive in the classroom." (Dodge & Coie, 1987, p. 1156)

Thus, social-cognitive biases and deficits are differentially related to two subtypes of aggressive behaviors (Dodge & Coie, 1987). The tendency to overattribute hostile intentions to others is linked to reactive aggression. The child's perception of the int nt, not the actual intent, determines an aggressive response (Dodge, et al., 1984). Reactive aggression involves errors and biases in interpreting threats which results in inappropriate displays of retaliatory aggression. This behavior relieves the perceived threat, or as described in earlier models, the "push" ending in aggression. Proactive aggressive behavior which includes coercion, dominance, and bullying occurs without immediate provocation or perceived threat, but as a means for reaching some specific positive outcome, the "pull" of aggressive behavior.

Dodge's social-cognitive approach to childhood aggression provides the framework for this study. This model includes cognitive development and environmental factors as mediating aggressive behaviors in children. In the descriptions of subtypes of aggression, Dodge and Coie included specific behaviors that could be adapted for developing a peer rating scale of types of aggression. This study can further examine the existence of subtypes of aggression within Dodge's model which has not been previously examined with peer ratings of aggression.

A sex difference pattern with boys being at higher risk for acting out behavior has been reported in epidemiological and clinical studies (e.g., Dreger, 1982). Research on sex

differences shows a marked greater prevalence rate in males during childhood for syndromes involving adjustment reactions, neurotic and psychotic disorder, gender identity, antisocial behavior, and learning disabilities (for a review, see Eme, 1979). Aman and Werry (1984) found that boys had significantly more symptoms than girls for conduct disorders, attention problems and motor excess. Maccoby and Jacklin (1974) reviewed 94 studies on sex differences and aggression in persons ranging from age 2 through adulthood and concluded that males were more aggressive than females as early as preschool. This study will examine sex differences on the items on the peer rating scale of aggression.

METHODS

Subjects

Three hundred ten, first and second grade students in 24 classrooms from three schools in a Southeastern metropolitan area were selected. Ages of subjects ranged from 6 years, 7 months to 9 years, 2 months (M = 7 years, 8 months, SD = 7 months). Ethnicity of subjects included 84 white non-Hispanic (40 male, 44 female), 109 Hispanic (52 male, 57 female), 113 Black non-Hispanic (54 male, 59 female), and 4 Asian (1 male, 3 female). Schools were selected as sites on the basis of their ethnic and socioeconomic status being representative of the school district's population. Approval from the Human Subjects Research

Review Committee at the University of Miami, as well as from the data site principal, teachers, and parents was obtained.

Instruments

The Childhood Aggression Peer Rating Scale (CAPERS). The CAPERS was developed for this study to investigate a peer rating of aggression and its relation to peer and teacher measures of social skills and peer likability. Items for the CAPERS were developed from Dodge and Coie (1987) to examine the validity of types of childhood aggression through teacher ratings, peer nomination, and observation. A goal in the CAPERS' development was the design of a continuous measure that could be examined both alone and in relation with other measures to provide information about aggression in children's peer groups. Six items on the eight item scale related to aggressive behavior. These items described blaming, being mean, fighting, taking without asking, bullying, and being angry. Two additional items of humor and leadership were included. These two items were described by Dodge and Coie (1987) as components of proactive behavior. These items were also used during the administration of the testing as neutral or non-antagonistic items.

The CAPERS was individually administered after a period of rapport building between tester and subject, and recognition and testing adjustment for any problems that a subject might experience that could influence the data collection. Subjects were shown an alphabetized listing of their selected classmates.

Testers read the items and names of the classmates and recorded the subject's response on the CAPERS protocol. Subjects were advised that their responses would be held in strictest confidence and that it was okay to respond honestly. The non-antagonistic behavior items of leadership and humor were interspersed in the item sequence. At the end of the testing, subjects were debriefed and asked how they felt about their responses.

Subjects' ratings ranged from 5 to 19 classmates (Mean = 11.79, SD = 4.43) in twenty four classrooms. A test for internal consistency resulted in a Cronbach's alpha of .84 for the eight item scale. In a test-retest for reliability for individual items after a one year span coefficient alphas ranged from .54 to .83 for 96 of the original subjects. Table 1 reports means and standard deviations for the CAPERS items.

Place Table 1 about here

Peer Ratings of Friendship (PEER). Peer ratings of friendship (Singleton & Asher, 1977) are sociometric measures providing information about the acceptance of children by their classmates. Mean ratings of peer acceptance have been found to be stable over time (Asher, Singleton, Tinsley, & Hymel, 1979) and tend to yield higher reliability coefficients than do peer nomination data (Hymel, 1983).

Peer acceptance data were collected from same sex classmates on a rating scale by subjects. Male raters ranged from 5 to 9 classmates (Mean = 7.07, SD = 1.29) and female raters ranged from 5 to 11 classmates (Mean = 7.33, SD = 1.91). Subjects were asked to "tell how much you would like to be friends with the classmates" listed on the protocol with "1" indicating "not at all" to the highest number indicating "very much". Subjects indicated their response by pointing to faces, with a smiling face indicating the most positive response and a frowning face indicating a number "1".

RESULTS

Pearson Product-Moment Correlations for each of the CAPERS items reported in Table 2 suggests high positive relations among the items on the CAPERS. Correlations for the mean peer rating ranged from -.44 (Leader with Blames) to .76 (Angry with Takes). AGG-TOTAL is the mean of the six aggressive items on the CAPERS, all items except Humor and Leader. Correlations with the AGG-TOTAL score ranged from -.36 with Leader to .88 with Bully.

Place Table 2 about here

A series of principal-axis factor analyses with varimax rotation requesting a two factor structure compared the results

of factor analyses on the CAPERS with Dodge and Coie's analyses of teacher ratings and peer nominations with similar items.

Table 3 reports the results of the CAPERS principal axis analysis using peer ratings of the entire sample of 310 first and second graders from 24 general education classrooms. Table 3 reports separate analyses for the full scale of the CAPERS including all eight items and an analysis excluding the items of leadership and humor.

Place Table 3 about here

Separate analyses by sex are reported in Table 4. These included 147 males and 163 females. Table 5 reports an analysis with subjects rejected by their peers at the time of data collection as determined through peer nominations by classroom (Coie, et al., 1982). This analysis most closely resembled the study of Dodge and Coie using peer rejected Black males. Sixty four subjects, 25 first graders and 39 second graders, were included in this analysis.

Place Table 4 about here

Place Table 5 about here

Results of the factor analyses suggest a single factor. Aggression items consistently loaded on a first factor across all

of the analyses, including the final analysis using rejected peers similar to the Dodge and Coie study. All of the analyses had eigenvalues less than one on the second factor. The factor structure for the CAPERS scale would suggest at best two factors: an aggression factor, and a humor/leadership factor, with items descriptive of aggression all loading uniformly on a single factor independent of separate analyses for sex or for subjects rejected by their peers.

Subjects from this study were identified as reactive or proactive based on elevated scores on composite reactive and proactive items. Forty four subjects (32 males and 12 females) were located who received .5 standard deviations or higher on all of the reactive items of Blames, Fights, and Angry. Only twelve of these subjects (8 males and 4 females) were not also elevated on all of the proactive items as well. Only two male subjects of the total 310 sample had elevated scores on the proactive items of Mean, Takes, and Bully as well as above the mean on Leadership and Humor. This finding would suggest little utility in distinguishing reactive and proactive groups of children for further study or intervention based on the categories of these two subtypes of childhood aggression.

Sex differences in the factor structure of the items on the CAPERS and for correlations among items was not supported by the analysis of the data. Pearson product moment correlations were examined for all scale items across all subjects and by sex. Table 6 presents correlations of the CAPERS by sex. Although

there were variations for sex, both factor structure and correlations were similar. A Fisher r-to-Z' transformation was used to assess the extent to which boys' and girls' correlations between mean scores of the CAPERS items differed significantly ($p < .05$). Significant differences between correlations by sex were found between three dyads of items: Takes and Blames with males obtaining a higher correlation; Leader and Fights with females obtaining a higher correlation. These significant differences are indicated by being underscored in Table 6.

Place Table 6 about here

Positive relations between peer ratings on the CAPERS and ratings of least liked peers was strongly supported by the results of the analysis. Frequencies of peer ratings of "not at all", or least liked ratings, were compared in relation to the AGG-TOTAL score on the CAPERS. The number of least liked ratings were standardized by classroom by dividing the number of peer ratings of "not at all" by the number of same sex respondents. Numbers of raters on the PEER ranged from 5 to 9 for males (M = 7.07, SD = 1.29) and 5 to 11 for females (M = 7.33, SD = 1.91). Numbers of raters on the CAPERS were larger, ranging from 5 to 19 (M = 11.79, SD = 4.43) because this rating was completed by all classmates of both sexes.

A Pearson product moment correlation of .42 resulted,

$p < .01$ in a two tailed test of significance. Correlations were also examined by sex. Male subjects received a .42 correlation with females receiving .43, both significant beyond the .01 level of significance, but were not significantly different from each other as assessed by a Fisher r-to-Z' transformation.

DISCUSSION

This study investigated the aggressive behaviors of children through peer ratings. A peer rating of aggression, the CAPERS, was developed and evaluated for reliability, factor structure, and its relation to peer acceptance. Because the CAPERS' items were derived from scales developed by Dodge and Coie (1987), the factor structure of the CAPERS was compared to this factor structure. Sex differences were also examined in factor structure and in relation to peer acceptance.

The test-retest for reliability of the CAPERS indicates that peer aggression ratings of children as young as seven remain moderately stable. In this study collection points spanned one year, and although some classmates were rated by the same children in both collection points, the majority of children were rated by different classmates. This finding is consistent with other research findings attesting to the stability of aggression beginning by at least the early school grades. Griffin (1987) concluded that aggressive behavior patterns in children by at least age ten have already become a major behavioral component that is stable at least through adolescence. In a 22 year

prospective study, Eron et al. (1986) found that aggressive behaviors in children beginning as early as age eight remained a stable behavior across extended collection points for as much as twenty years.

Results of the analyses to examine the factor structure indicate a unitary construct for the aggression items on the CAPERS. All items consistently loaded on one factor. When the items of humor and leadership were added to the analyses, these items loaded as a second factor. Separate analyses were generated to examine factor structure by sex and for peer rejected subjects. No sex differences in factor structure were indicated with all aggressive items loading on a first factor. These values were similar to values for items loadings with the general sample.

Factor structure indicating a unitary construct was also obtained when only subjects rejected by their peers was analyzed. As with the general sample of subjects in this study, when the items of humor and leadership were included in the analysis, these two items loaded as a second factor.

These results do not support Dodge and Coie's two factor model of children's aggressive behaviors. Although Dodge and Coie (1987) reported proactive items loading as a second factor on both the teacher ratings and peer nominations analyses, neither second factor reported an eigenvalue greater than one. Like the CAPERS data, all of the Dodge and Coie aggressive items were highly intercorrelated.

A plausible explanation may be that the Dodge and Coie factor structure is, in fact, similar to this study's results. Examination of the factor structures of Dodge and Coie study and this study show very similar results, a unitary construct of aggression. Dodge and Coie's interpretation of results investigating the construct validity of subtypes of aggression was not substantiated.

The results of this study do not imply that there are not structural differences between aggressive types of children or that aggressive subtypes do not exist. However, these differences in structure were not found in this study. Specific behavioral or structural types of aggression are found in both adult and animal research. It is unlikely that these differences do not also exist in children. Differences in the mediators or precipitators of aggression in children do exist (Cairns, et al., 1989; Cummings, et al., 1989; Yudofsky, et al., 1986). Two types of aggression, instrumental and hostile, are extensively found in adult (e.g., Tosh, 1972) and animal literature (e.g., Lorenz, 1966).

Whereas Dodge and Coie (1987) attempted to identify two subtypes of children's aggressive behavior in socially rejected children which they termed reactive and proactive, findings of these subtypes were not supported here in either their factor structure or in the results of this study using peer ratings of aggression. However, researchers have observed two distinct types of aggression in children as early as seven to 12 months of

age (Szegal, 1988). It is possible that subjects, both in this study and the Dodge and Coie study, demonstrated both reactive and proactive aggressive behavior. These aggressive behaviors may not be distinguishable to peers. Both of these behavior types may coexist within children demonstrating aggression.

One model of social competence (Vaughn & Hogan, 1990) views social competence as a multifaceted construct analogous to intelligence. Like intelligence, social competence is made up of interdependent components, all related and all made up of multiple skills. Vaughn and Hogan consider four core components comprising the higher order construct of social competence. These are 1) positive relations with others, 2) accurate/age-appropriate social cognition, 3) absence of maladaptive behaviors, and 4) effective social behaviors. Within the context of this model, the results of this study on aggressive behavior of children support the notion of interdependent components effecting the outcomes of other components and the overall construct of social competence. Aggressive behavior is a maladaptive behavior. This behavior relates to other measures of social competence by teachers and peers, namely peer acceptance, and teacher measures of social skills and problem behaviors.

An expected outcome within the context of the social competence model would be positive relations between levels of aggression and peer ratings of least liked friendships. This outcome was supported in this study. The results of the analyses examining the relations between peer acceptance and levels of

aggression are also consistent with the body of research supporting aggression as highly related to peer rejection (e.g., Cantrell & Prinz, 1985; French & Waas, 1985; Parker & Asher, 1987; Perry, et al., 1988). Children high in aggressive behavior and other antisocial behaviors are rejected by their peers and show poor social skills (Carlson et al., 1984). Peer rejected children are more aggressive than are popular or neglected children. They make more hostile remarks, exclude and hit peers more, and engage in fewer social conversations than do their popular or average accepted peers (Dodge, 1983). Children rejected by their peers exhibit low social skills and high levels of aggression and are more disruptive and more socially inappropriate than their non-peer rejected classmates (Perry, et al., 1988; Shantz, 1986). Peer rejected children are described as aggressive, disruptive, and inattentive by both their teachers and peers (Cantrell & Prinz, 1985; Smith, 1985). These results have implications for not only the positive relations between levels of aggression and ratings of least liked friendships, but also in connection with levels of aggression and ratings of social skills and problem behaviors.

Males are more at risk for acting out behavior (Dreger, 1982), conduct disorders (Aman & Werry, 1984), criminal behavior (Cairns, et al, 1989), direct aggression (Feshbach, 1969), and peers' nominations of aggression (Pollack, et al., 1989). This study investigated whether sex differences existed between peer

ratings of aggression in factor structure and in relation to measures of peer acceptance.

The hypothesis that sex differences would consistently exist in factor structure and in relations to peer acceptance was not confirmed. The factor structure and items loadings of the separate factor analyses by sex of the CAPERS were consistent with almost identical items loadings converging on a first factor. Intercorrelations of CAPERS items showed few differences. The weakest intercorrelations occurred between aggression items and the items humor and leadership. Humor and leadership items were also the least stable in the test-retest reliability. For the six aggression items, no significant differences in the relations between items by sex were indicated in the results. Frequencies of least liked ratings on the PEER were also evenly distributed with correlations between the PEER and the CAPERS demonstrating nonsignificant differences for males and females.

Aggressive behaviors in children appear stable across time and classrooms and are linked to other maladaptive behaviors. Whereas various assessments exist for the identification of aggressive children, few incorporate peer information, particularly peer ratings of specific aggressive behaviors. This type of aggregated peer information may be an added tool for the further understanding of and intervention for the aggressive child.

This study investigated the use of peer ratings of aggression. The CAPERS proved to be a reliable assessment of aggressive behavior for students in first and second grade, across gender and ethnic diversity with consistent and predictable relations to peer acceptance. However, the study did not support a multiple factor model of childhood aggression.

Continued research in this area is needed to further understand the complex nature of aggression in children. A next direction of study could include subgrouping the sample by grade level, school, or ethnicity. Differences between grade level, school and socioeconomic class could add valuable information about the aggressive behavior of different ethnic and economic backgrounds.

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Table 1

Means and Standard Deviations for CAPERS Items

Item	Mean	SD
(BLAMES) ALWAYS BLAMES SOMEBODY ELSE	2.20	.59
male	2.27	.55
female	2.14	.61
(HUMOR) CAN MAKE THE CLASS LAUGH	2.21	.57
male	2.40	.50
female	2.05	.58
(MEAN) GETS KIDS TO BE MEAN TO OTHER KIDS	1.93	.57
male	2.02	.54
female	1.84	.59
(FIGHTS) IS ALWAYS READY TO FIGHT	1.99	.64
male	2.27	.57
female	1.74	.59
(LEADER) IS A GOOD LEADER	2.46	.49
male	2.42	.45
female	2.49	.53
(TAKES) FIGHTS TO TAKE WHAT S/HE WANTS	2.04	.59
male	2.21	.56
female	1.88	.57
(BULLY) BULLIES OTHER KIDS	1.95	.59
male	2.11	.52
female	1.81	.61
(ANGRY) GETS ANGRY EVEN IF AN ACCIDENT	2.07	.56
male	2.18	.51
female	1.97	.58
AGG-TOTAL*	2.03	.51
male	2.18	.47
female	1.90	.50

* AGG-TOTAL computed as mean of aggression items without leader or humor items.
Key: 4 "all the time"; 3 "pretty much";
2 "not very often"; 1 "never"

Table 2

Correlations Among CAPERS Items

	BLAMES							
HUMOR	.20*	HUMOR						
MEAN	.66*	.39*	MEAN					
FIGHTS	.56*	.43*	.71*	FIGHTS				
LEADER	-.44*	.07	-.24*	-.22*	LEADER			
TAKES	.64*	.33*	.67*	.72*	-.35*	TAKES		
BULLY	.66*	.36*	.73*	.72*	-.29*	.73*	BULLY	
ANGRY	.65*	.31*	.70*	.69*	-.32*	.76*	.72*	ANGRY
AGG-TOTAL	.80*	.39*	.86*	.85*	-.36*	.87*	.88*	.87*

* $p < .01$, two-tailed
Note: AGG-TOTAL computed as mean of aggression items without leader or humor items.

Table 3

Item Loadings and Eigenvalues of the CAPERS Data with All Subjects With and Without Items of Leadership and Humor

	All Subjects/ All Items (N = 310)		All Subjects/ - Humor and Leader (N = 310)	
	Factor 1	Factor 2	Factor 1	Factor 2
REACTIVE ITEMS				
FIGHTS	.83	.21	.84	- .28
BLAMES	.77	-.27	.77	.29
ANGRY	.85	-.03	.85	.03
PROACTIVE ITEMS				
TAKES	.86	-.04	.85	-.03
MEAN	.84	.10	.84	.01
BULLY	.86	.03	.87	.00
LEADER	-.38	.53	---	---
HUMOR	.41	.44	---	---
eigenvalues	4.50	.60	4.20	.16
% of variance	56.3	7.5	70.0	2.8

Table 4

Item Loadings and Eigenvalues of CAPERS Data by Sex

	Males (N = 147)		Females (N = 163)	
	Factor 1	Factor 2	Factor 1	Factor 2
REACTIVE ITEMS				
FIGHTS	.82	.25	.82	-.12
BLAMES	.85	-.39	.71	.01
ANGRY	.85	.08	.85	.21
PROACTIVE ITEMS				
TAKES	.85	.05	.85	.26
MEAN	.80	-.04	.89	-.28
BULLY	.85	.06	.85	-.06
eigenvalues	4.22	.23	4.13	.21
% of variance	70.5	3.9	68.9	3.5

Table 5

Item Loadings and Eigenvalues of Students Rejected by Their Peers

(N = 64)

	Factor 1	Factor 2
REACTIVE ITEMS		
FIGHTS	.82	.11
BLAMES	.78	-.21
ANGRY	.88	.00
PROACTIVE ITEMS		
TAKES	.84	-.02
MEAN	.84	-.02
BULLY	.83	.00
HUMOR	.53	.47
LEADER	-.16	.68
eigenvalues	4.60	.74
% of variance	57.5	9.4

Table 6

Correlations of Capers Items by Sex

	BLAMES	HUMOR	MEAN	FIGHTS	LEADER	TAKES	BULLY	ANGRY
HUMOR								
Males	.15							
Females	.19*							
MEAN								
Males	.70**	.28**						
Females	.62**	.42**						
FIGHTS								
Males	.59**	.34**	.66**					
Females	.55**	.37**	.77**					
LEADER								
Males	-.41**	.04	-.35**	-.27**				
Females	-.45**	.14	-.15*	-.16*				
TAKES								
Males	.71**	.27**	.65**	.71**	-.36**			
Females	.58**	.27**	.67**	.68**	-.35**			
BULLY								
Males	.69**	.22**	.68**	.70**	-.26**	.74**		
Females	.64**	.36**	.76**	.70**	-.30**	.70**		
ANGRY								
Males	.69**	.20*	.69**	.71**	-.36**	.73**	.73**	
Females	.61**	.33**	.70**	.66**	-.28**	.77**	.69**	
AGG-TOTAL								
Males	.85**	.28**	.84**	.84**	-.39**	.88**	.87**	.87**
Females	.78**	.38**	.88**	.85**	-.33**	.85**	.88**	.86**

* p < .05 ** p < .01, two-tailed

Note: Underlined values indicate significantly different correlations between males and females. AGG-TOTAL represents the mean of all aggression items excluding the items of leadership and humor.

Table 2
Frequency of Subjects by Sex and Ethnicity

	Ethnicity				
	White	Hispanic	Black	Other	Total
Sex					
Male	40	52	54	1	147 (47%)
Female	44	57	59	3	163 (53%)
Total	84 (27%)	109 (35%)	113 (37%)	4 (1%)	310 (100%)

Table 3
Frequency of Subjects by Sex and School

	School			
	Dunbar	Fairchild	Benttree	Total
Sex				
Male	60	33	54	147 (47%)
Female	72	37	54	163 (53%)
Total	132 (42%)	70 (23%)	108 (35%)	310 (100%)