INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps.

ProQuest Information and Learning
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
800-521-0600

**THE IMPLICATIONS OF POOR PEER RELATIONS FOR
CHILDREN'S MENTAL HEALTH**

by

BEVERLEY VARGO

Thesis presented to the School of Graduate Studies and Research of
Carleton University
in partial fulfillment of the requirements for the degree of
Doctor of Philosophy

Ottawa, Ontario, 1990

UMI Number: DC52773

All rights reserved

INFORMATION TO USERS

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleed-through, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

UMI Microform DC52773
Copyright 2008 by ProQuest LLC
All rights reserved. This microform edition is protected against
unauthorized copying under Title 17, United States Code.

ProQuest LLC
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106-1346

Acknowledgements

It would have been impossible to complete my doctorate without the help and support of many individuals.

Special thanks is due to my advisor, Bruce Ferguson, who by making me believe in myself gave me the confidence to undertake such a challenging task. His encouragement and guidance over the years have been invaluable.

Thanks also to my family and friends. Their love and unwavering faith that I would be successful has carried me through many dark moments.

The cooperation of the staff, students, and parents of Frank Ryan, St. Matthew, St. Mark, St. Paul, and Lester B. Pearson schools of the Carleton Roman Catholic School Board and Greenbank Senior Public School and Rideau Valley Middle School of the Carleton Board of Education in the data collection phase of the research was very much appreciated.

Finally I would like to thank the staff of the psychology department of Carleton University who have so willingly shared their time and expertise.

TABLE OF CONTENTS

ABSTRACT	2
INTRODUCTION	3
REVIEW OF THE LITERATURE	7
Longitudinal Studies	7
Aggression and Withdrawal as Predictors of:	
Psychiatric Disorder	8
Criminal Behavior	15
Educational Problems	17
Concurrent Studies	21
In school samples	22
In clinic and high-risk samples	24
THE PRESENT STUDY	33
Research Objectives	33
Methodology	41
Sample	41
Instruments	42
Design	57
Procedure	58
Data Analysis	60
RESULTS	62
DISCUSSION	77
REFERENCES	90

List of Tables

Table 1	Summary of the Literature Relating Social Adjustment to Adjustment in Other Areas	27
Table 2	Thesis Participants/Sample Characteristics	43
Table 3	Validity Coefficients RCP	46
Table 4	Validity Coefficients HIC-R	50
Table 5	Descriptive Statistics/Results of Post-hoc Analyses following significant Manova	63
Table 6	Discriminant Function Analysis Results	71
Table 7	Univariate Results for Subgroups of Aggressive Children	73
Table 8	Univariate Results for Subgroups of Withdrawn Children	74
Table 9	Chi-Square Results for Children Scoring Within The Pathological Range on the Children's Depression Inventory	86
Table 10	Chi-Square Results for Children Scoring Within The Pathological Range on the Revised Children's Manifest Anxiety Scale	86

List of Figures

- Figure 1 Graphic Analysis - Mean Z-scores on
Internalizing-Externalizing
Mental Health Problems

68

Appendices

Appendix A	Results of Pilot Study (Vargo, 1988)	98
Appendix B	Copy of Revised Class Play	135
Appendix C	Copy of Hostility Inventory for Children-R	138
Appendix D	Factor Structure of the HIC-R	141
Appendix E	Item-Summary Score Correlations HIC-R	142
Appendix F	Copy of Children's Manifest Anxiety Scale	144
Appendix G	Copy of Children's Depression Inventory	146
Appendix H	Copy of Youth Self-Report Inventory	151
Appendix I	Copy of Teachers' Report Form	155
Appendix J	Copy of Piers- Harris Children's Self-Concept Scale	159
Appendix K	Copy of Social Support Scale	161
Appendix L	Item-Total Score Correlations Social Support Scale	163
Appendix M	Correlation Matrix of Study Variables	165
Appendix N	Parent Consent Letter	168
Appendix O	Administration Procedure for Instruments	171
Appendix P	Letter to Participating Teachers	173
Appendix Q	Chi-Square Results for Median Split on Self-Esteem	174
Appendix R	Chi-Square Results for Median Split on Social Support	174
Appendix S	Results of Factorial Manovas for Self-Esteem	175
Appendix T	Results of Factorial Manovas for Social-Support	177

ABSTRACT

Poor peer relations characterized by aggression or withdrawn behavior have been documented to be prognostic of disordered outcome in adolescence and adulthood. In longitudinal research, aggression and withdrawal in childhood have been associated, both retrospectively and prospectively, with psychopathology, criminality, and educational problems. While the conclusion to be drawn from this research is that aggression and withdrawal in childhood are associated with subsequent disorder, the evidence with regard to aggression is more robust than it is for withdrawal. It has been suggested that this is due to the greater conceptual congruence between aggression and traditional outcome measures, particularly delinquency and adult criminality. Rather than problems of an externalizing nature, withdrawn children may be more at risk for problems of an internalizing nature, such as anxiety and depression. The present study examined the concurrent mental health status of children identified by their peers as aggressive or withdrawn in the context of an internalizing/externalizing symptom dichotomy. In addition the role of self-esteem and social support in the relationship between social and mental health problems was investigated.

Subjects for the present study were 537 grade 7 students in 27 classes in seven schools in the Ottawa-Carleton region. In the first stage of the study children were asked to nominate peers for roles in an imaginary play depicting sociable,

aggressive, and withdrawn behaviors. Those students who scored 1.5 standard deviation above the mean on sociability, aggression or withdrawal were then selected for the second phase of the study. In addition, a group of students average in their sociability were selected from those subjects who did not meet the identification criteria. In the clinical assessment stage of the research, internalizing and externalizing indices of concurrent mental health were administered.

Findings from the present study supported the risk status of children identified by their peers as aggressive or withdrawn. When compared with sociable and socially average children, aggressive and withdrawn children had significantly higher mean scores on the indices of mental health used in the study. The predicted differentiation between aggressive and withdrawn children on the basis of a dichotomy between internalizing and externalizing symptomatology was also confirmed. Aggressive children had significantly higher mean scores on externalizing indices of concurrent mental health - self-rated physical aggression and negativism, teacher-rated aggression, and behavior. In contrast, withdrawn children had significantly higher mean scores on internalizing measures - covert hostility, anxiety, depression, and teacher-rated social withdrawal. For both "at risk" groups low self-esteem or weak social support was related to an exacerbation of internalizing and externalizing symptomatology. The implications of the present results for both applied and research settings are discussed.

THE IMPLICATIONS OF POOR PEER RELATIONS FOR CHILDREN'S MENTAL HEALTH

The past decade has witnessed an upsurge in interest in children with poor peer relations. Rubin (1983) noted a two-fold increase in articles concerning peer relationships and social skills published in *Child Development* from 1971/1972 (11%) to 1981/1982 (22%) and this momentum has carried through the '80's. Research has focused on the development of an assessment methodology for identifying low accepted children, the delineation of social skill deficits in this population, and the design of programs for teaching children the requisite social skills. The historical roots of this research lie in the work of developmental psychologists like Piaget (1932), Mead (1934), and Sullivan (1953) who documented the importance of peer relationships for healthy development. Through the opportunity to observe and practice alternative social roles with peers, children learn the social skills necessary to make and maintain social relationships. In addition, by reinforcing prosocial behavior and punishing or ignoring antisocial behavior, peers serve as the agents by which children learn to conform to normative behavior standards.

Current interest in low accepted children has been generated by the assumption, implicit in the literature relating peer relationships to healthy development, that children who

are unable to make and maintain peer relationships are a population at risk. Evidence in support of the risk status of children with social problems derives from the results of a number of studies relating problems in childhood to disordered outcome in adolescence and adulthood. In this research poor peer relations have been found to be prognostic of psychiatric disorder (Cowen, Pederson, Babigian, Izzo, and Trost, 1973; Bower, Shelhammer and Daily, 1960; Fleming and Ricks, 1969; Robins, 1966; Morris, Soroker, and Burruss, 1954; Michael, Morris, and Soroker, 1957; Rubin and Mills, 1987); criminal behavior (Farrington, 1978; Roff, Sells, and Golden, 1972; Roff and Wirt 1984; Feldhusen, Thurston, and Benning, 1973; Kupersmidt, 1983; Janes, Hesselbrock, Myers, Penniman, 1979) and educational problems (Havinghurst, Bowman, Liddle, Matthews and Pierce, 1962; Feldhusen, Thurston, and Benning 1971; Kuhlen and Collister, 1952; Ledingham and Schwartzman, 1984).

The two behavior patterns which have been found to most frequently characterize dysfunctional peer relationships are aggression and withdrawal. The present research examined the concurrent risk status for mental health problems of grade 7 children identified by their peers as behaving in either an aggressive or a withdrawn manner in social situations. Mental health problems as used in the present context is an inclusive term encompassing both emotional and behavioral problems. This term was used in lieu

of psychopathology as it was felt it connoted sub-clinical as well as clinical levels of symptomatology.

The research focused on issues in the existing literature which had either produced inconsistent findings or had not been addressed previously. The first of these issues concerned the contradictory findings with regard to the risk status of withdrawn children. While retrospective studies have indicated that withdrawal in childhood is cited more frequently in case histories of schizophrenics (Bower, Shelhammer and Daily, 1960; Fleming and Ricks, 1960), prospective studies have failed to find evidence of a predictive association between withdrawal and disordered outcome (Morris, Soroker and Burruss, 1954; Michael, Morris and Soroker, 1957; Robins, 1966). This has led some reviewers (Coie, 1985) to conclude that withdrawn children are not a population at risk. Not only is this viewpoint at odds with the clinical literature (DSM-III), it has important implications for the exclusion of withdrawn children from intervention programs, such as social skills training. The use of the same measures for assessing the outcome of aggression and withdrawal has been cited (Rubin, 1985) as one possible reason for the failure to find evidence for the risk status of withdrawn children. In the present research the mental health problems associated with the childhood behavior patterns of aggression and withdrawal were examined in the context of an internalizing-externalizing symptom dichotomy.

Another shortcoming of the previous literature has been the failure to address the issue of why some aggressive or withdrawn children develop disordered outcomes and others do not. In research by Cowan et al. (1973) only 19% of children identified as at risk in grade one subsequently developed problematic behaviors severe enough to be seen in a clinical setting. Two variables - self-esteem and social support - hypothesized to play a role in the relationship between social and mental health problems were examined in the present study.

The research design has incorporated many of the features suggested by Parker and Asher (1987) for improving the quality of research on the risk status of low accepted children - school sample rather than clinic or high-risk sample; peer assessed aggression and withdrawal; well validated assessment instruments; and differentiated outcome measures. It is anticipated that the results of the present research will have both theoretical and applied implications for researchers and practitioners working in the area of peer relations.

In the following section the relevant literature is reviewed in order to provide the historical context for the research. This is followed by a description of the present study.

REVIEW OF THE LITERATURE

There have been two main approaches to the study of the implications of poor peer relations for subsequent disorder: longitudinal studies in both normal and clinical samples and concurrent studies of school and clinic samples of children. Measures of disordered outcome have included : a) psychiatric disorder; b) criminal behavior; and c) educational problems. Peer relationship problems have been indexed through the use of sociometric data and nominations for negative social attributes based on teacher behavior checklists or peer-rated measures (Class Play and Guess Who). This review will concentrate on the literature relating the negative social attributes of aggression and withdrawal to the various indices of disordered outcome.

Longitudinal Studies:

Longitudinal studies have examined the implications of aggression and withdrawal, both retrospectively and prospectively, for disordered adult outcome. Retrospective studies start with the disordered outcome and proceed by looking back over time to determine if the disordered adults had poor peer relations as children. Prospective studies on the other hand, start with a population of children with poor peer relations and follow the children forward in time to see if they develop problems as adults. Retrospective studies lack the predictive power of prospective research. While retrospective

studies indicate a relationship between childhood peer relation problems and adult maladjustment only prospective studies can specify the proportion of children with peer relation problems that become maladjusted adults.

Aggression and Withdrawal as Predictors of Psychiatric Disorder

The most widely-cited retrospective study which demonstrates the predictive power of early dysfunctional social relationships for subsequent maladjustment is by Cowen et al. (1973). Based on a composite of data sources (social work interviews with mothers of first grade children, group psychological evaluation of grade one children, classroom observation, and teacher reports) children were given a prognostic classification of red tag or non red tag. Eleven to thirteen year follow up of these early-detected potentially vulnerable children indicated that a disproportionate number of red tag children had been seen in a clinical setting for psychiatric problems. From a variety of data sources including school achievement, IQ, days absent, self-reported anxiety, self-concept, peer assessment of social adjustment, and teacher ratings of behavior, peer ratings of social adjustment in grade 3 involving negative choices using Bower's (1960) Class Play emerged as the only significant predictor of subsequent adjustment. Unfortunately, the version of the Class Play used in the Cowen et al. (1973) study did not discriminate between aggression and withdrawal in negative choice nominations,

thereby making it impossible to determine which of the two social behaviors was more related to subsequent disturbance. In addition, the study does not provide any information on the nature of the psychological difficulties, beyond stating that the modal diagnosis was "adjustment reaction of adolescence or childhood", a rather nonspecific diagnostic category.

Longitudinal studies conducted retrospectively have documented an association between withdrawal and schizophrenia (Birren, 1944; Frazee, 1953; O'Neil and Robins, 1958). In fact the diagnosis of schizophrenia is often based on evidence of "withdrawal from the outside world". Bower, Shelhammer and Daily (1960) studied forty-four male schizophrenic patients. On an interview rating scale, former high school teachers and counsellors rated the preschizophrenic boys (n=44) as significantly different from a normal control group (n=44) on 16 of the 20 items. In general, preschizophrenic boys were found to be more passive with respect to others and their environment. In addition, as a group they were rated as more apathetic, careless, dependent, irresponsible, depressed, submissive, anxious, and less well-liked than controls.

Fleming and Ricks (1970) found similar differences in the emotional experiences of preschizophrenics (n=49) compared with socially approved controls (n=24). On a 81 item Personal Feelings Inventory, feelings of anxiety, vulnerability, and unreality were more prevalent in the preschizophrenic group

($p < .001$). The single most discriminating emotional experience was the feeling of isolation and alienation reported by preschizophrenics who perceived peers as ignoring or rejecting them.

While retrospective studies have indicated that withdrawal in childhood may be a precursor of schizophrenia, prospective studies have generally not borne out the relationship. Morris, Soroker, and Burruss (1954) studied the adult adjustment of 54 children formerly seen at the Dallas Child Guidance Clinic 16 to 27 years previously. On the basis of data gathered from an unstructured interview, sixty-eight percent (37) of the children were judged as having made a satisfactory adjustment, 28% (15) a marginal adjustment, and only 4% (2) were considered to be sick. Findings from the 1954 study were replicated and extended in subsequent research (Michael, Morris and Soroker, 1957). The subjects were 606 male clinic patients classified on the basis of case histories as introverts ($n=164$), extroverts ($n=268$) or ambiverts ($n=174$). These categories referred to patterns of social withdrawal, aggression, or a mixture of withdrawal and aggression. Using clinical diagnosis as the criterion of adjustment, only one introvert was diagnosed schizophrenic, compared with three extroverts and six ambiverts. From these results it would appear that aggression rather than withdrawal is more predictive of schizophrenia.

Similar findings with respect to the predominance of externalizing rather than internalizing childhood symptoms in

schizophrenics were reported in a follow-up study of clinic children by Robins (1966). Incurrigibility, running away from home, theft, and poor school performance were much more common than shyness or withdrawal in preschizophrenics. However for clinic girls and for a more global index of psychosocial adjustment, Janes and Hesselbrock (1978) found a predictive association between shyness/withdrawal and adjustment in young adulthood. In a prospective study of children seen at the Child Guidance Clinic of Washington University between 1961-1965, teacher ratings of shyness/withdrawal were related to mean mental health ratings by psychiatrists 12-15 years later.

It is unfortunate that up until now much of the research on the prognostic implications of childhood withdrawal has concentrated on the clinical diagnosis of schizophrenia. Withdrawal is part of the clinical picture of other disorders such as depression, anxiety, and phobic reactions, particularly agoraphobia in adults. These outcomes may provide fruitful measures for future research on adult outcomes of childhood withdrawal.

A promising avenue of inquiry into the prognostic implications of social withdrawal comes from a longitudinal study currently being conducted at the University of Waterloo (Rubin and colleagues, 1982; 1983; 1985; 1988). A school sample of withdrawn children has been followed from kindergarten through grade 5 with data gathered through

behavioral observations, teacher- and peer-ratings of social behavior, and measures of perceived competence, loneliness, and depression. Two different subtypes of withdrawal in children have been identified - passive isolation and active isolation. Passive isolation in young children is associated with quiet, constructive or exploratory play and sedentary behavior. In contrast, active isolation is characterized by cognitively immature and rambunctious behavior. Analysis of the data has indicated that passive isolation, but not active isolation, is associated with the internalizing symptoms of depression and loneliness in grade 5. Active isolation is associated with externalizing symptomatology. Based on the findings from this longitudinal study, Rubin and Mills (1988) have concluded that withdrawal is a multidimensional construct. Future research is required to determine if passive and active isolation are associated with different outcomes throughout the life span.

Evidence for the prognostic implications of aggression in childhood for psychiatric disorder is conflicting. In the classic study of deviant children by Robins (1966), thirty-two percent of children later diagnosed as sociopathic personality had been physically aggressive (n=133) as children. In addition for 29% of the clinic sample, the childhood symptom of physical aggression was predictive of a variety of diagnoses other than sociopathic personality - alcoholism (8%); schizophrenia (9%); anxiety neuroses (5%); chronic brain syndrome (5%) and hysteria (2%). When taken collectively these statistics indicate

that, assuming no individual received more than one diagnostic label, childhood aggression was associated predictively with psychiatric disorder in 62% of the clinic sample.

In follow-up analyses Havinghurst et al. (1962) reported a significant negative correlation, $r = -.24$, between peer nominations for aggressiveness and "initial adult adjustment", a global index which included poor mental health. The strength of the association between aggression and adult adjustment is even more powerful when highly aggressive children rather than the total sample are considered. Thirty-seven percent of the children in the top quartile on aggressive maladjustment were rated at time of follow-up (9 years) to have poor initial adult adjustment compared to 10% in the lowest quartile of aggressive maladjustment.

Contradictory evidence with regard to the risk status of aggression for psychopathology is found in research by Janes and Hesselbrock (1978). In a clinic study of aggressive males aggression was not associated predictively with poorer mental health, after controlling for socioeconomic status and intelligence. In addition aggressive boys did not differ from nonaggressive boys in their risk for later psychiatric hospitalization. However in research conducted the following year by the same authors (Janes, Hesselbrock, Myers, and Penniman, 1979) a more global index of poor peer relations "fails to get along with other children" was associated predictively with greater psychiatric hospitalization, in addition

to other indices of disordered outcome (not going far in school; more job dismissals caused by behavioral problems; more trouble with the law; more arrests). This illustrates the general trend in the literature for aggression and withdrawal to be more predictive of global indices of psychological adjustment than specific diagnostic categories.

Aside from the retrospective nature of much of the research a serious limitation of the literature relating aggression and withdrawal to psychiatric disorder is the laxness of the criteria used to operationally define the outcome index of adjustment. For example in the research most frequently cited as evidence for the lack of a predictive association between withdrawal and psychiatric disorder (Morris, Soroker and Burrus, 1954; Michael, Morris and Soroker, 1957) the definition of marginally adjusted individuals - "those who are not quite adequately adjusted but still not sick; those who are not fulfilling their potential, but still not needing treatment in their opinion or in ours; those who are just getting along, but without much positive enjoyment or fun out of living" - leaves much latitude for differences in interpretation. Similarly in the 1957 research there is no indication of how the categories introvert, extrovert and ambivert, were operationally defined and no index of interrater reliability reported. This lack of precision in diagnostic criteria combined with measures of undocumented reliability and validity may in part account for the inconsistent

findings with regard to the risk status of aggression and withdrawal for psychiatric disorder.

Aggression and Withdrawal as Predictors of Criminal Behavior.

A robust relationship between aggression and criminality has been documented in both follow-back and follow-up studies. Feldhusen, Thurston and Benning (1973) reported that teacher-identified aggressive boys and girls in their sample were about twice as likely as nonaggressive children to have later police contact (47.9% versus 22.3%), seven times as likely to appear in juvenile court (23.9% versus 3.1%) and nearly ten times as likely to have a later conviction (9.9% versus 1%). Havinghurst et al. (1962) reported that 83% of boys in the top 5% on peer-rated aggression (n=18) later committed serious to very serious juvenile offences, compared with only 11% of boys who were below the 75th percentile score.

The power of aggression to predict delinquency has been demonstrated to be independent of the predictive power shared with related variables. Kupersmidt (1983) examined police and juvenile court files for children named by their fifth grade peers as frequently starting fights. Analysis of the data revealed not only that peer ratings of aggression predicted subsequent delinquency, but more importantly, that this effect was independent of the predictive power shared with antisocial behavior such as stealing. Similarly in a path analysis of data from the Roff and Sells (1969) longitudinal study, Roff and Wirt

(1984) found that in a sample of low social status children childhood aggression predicted delinquency over and above the predictive power it shared with not being liked.

Aggressiveness has also been related to the severity of the criminal activity. In a prospective study examining the prediction of delinquency from aggressiveness, Farrington (1978) reported that ratings of aggression at three age ranges, 8-10, 12-14, 16-18 were highest for violent delinquents, intermediate for non-violent delinquents and lowest for non-offenders (violent delinquents were those youths charged with offences involving bodily harm to an individual.) Nearly half of the violent delinquents (48.1%) had been rated as aggressive by teachers at ages 8-10. This figure rose even higher in the age range 12-14 where 70.4% of the violent delinquents had been rated by teachers as aggressive, compared with 23.3% of non-delinquents.

The only discordant finding relating aggression to criminal behavior is reported in a study by Janes et al. (1979) in a clinic sample of boys (n=149). Teacher ratings for the item "fighting" was not found to be predictive of involvement with the law. However, a more global index, bad conduct, was related to being convicted of a criminal offence and being sent to jail. Bad conduct in childhood was a composite of scores on items related to negatively oriented behavior directed against society, including fighting. Bad conduct in childhood was found to be

very stable and was related to indices of bad conduct in adulthood.

In contrast to the extensive literature relating aggression to subsequent criminal behavior, there is no parallel body of research indicating that withdrawn children are at risk for subsequent criminal outcome. This may be due to the conceptual inconsistency between the nature of withdrawal and the behaviors associated with juvenile and adult criminal offences.

Aggression and Withdrawal as Predictors of Educational Problems

Several indices of educational adjustment have been used to examine the relationship between aggression and withdrawal and adjustment at school: school grades; school failure; standardized test scores; drop out rates; and graduating-year class rank. The adverse effects of both aggression and withdrawal on academic adjustment have been reported for each of these indices (Kuhlen and Collister, 1952; Havinghurst et al., 1962; Feldhusen et al., 1971; Ledingham and Schwartzman (1984).

Havinghurst et al. (1962) reported that rank in high school was negatively correlated with both aggression (-.30 males; -.32 females) and withdrawal (-.26 males; -.40 females). In assessing the academic achievement of children who scored in the top 10% on aggression and withdrawal (n=92), it was found

that, compared to the total group, twice as many aggressive children and three times as many withdrawn children failed to pass at least one grade. Similar findings were reported for aggressive, but not withdrawn, children by Ledingham and Schwartzman (1984). The academic placement of aggressive (n=122), withdrawn (n=150), aggressive-withdrawn (n=182) and control children (n=299) was compared three years after initial assessment. Children identified by peers as aggressive-withdrawn or aggressive were more likely to have failed a grade or to be in a special class than were withdrawn or control children.

Research by Feldhusen, Thurston and Benning (1971) reported that, even after controlling for IQ, mean teacher marks in grades 8 and 11, for children identified as aggressive in grades 3 and 6 were significantly lower than for socially approved controls ($p < .01$). Similarly, mean standardized test scores (reading, writing, math, social studies, science) were significantly lower for children identified by teachers as aggressive in the third and sixth grades than for children identified as socially approved. For children nominated as aggressive in grade 9 and who five years later had completed high school, significant differences in academic achievement between aggressives and socially approved children were also reported. In addition, aggressive children had a significantly lower mean percentile rank in their graduating year (27.5 compared to 69.19 for socially approved students).

Another index of educational adjustment reported in the literature is dropping out of school. Comparisons of dropouts and graduates (Havinghurst et al., 1962; Kuhlen and Collister, 1952; Feldhusen, Thurston, and Benning, 1973) have consistently reported that both aggressive and withdrawn children have higher rates of dropping out than do other children. Kuhlen and Collister (1952) studied the social adjustment of sixth- and ninth-graders who failed to finish high school. Using both a sociometric nomination measure and a Guess Who instrument, dropouts were found to be physically unattractive, poorly groomed, unpopular, and unhappy when compared to graduates. Sex differences on the personal and social traits assessed by the Guess Who measure indicated that male dropouts were rated by peers in both grade 6 and grade 9 as being more restless, talkative, bossy, and enjoying a fight more than graduates. The only consistent difference for both grade 6 and grade 9 girls was that female dropouts were less willing to take a chance than female graduates. However, the study results do not allow us to determine directly how the attributes of withdrawal and aggression are related to dropping out of school. Only inferences can be made based on similarities between discriminating items and the attributes under study. For example, from the fact that female dropouts had lower scores at both grade levels on the item "talkative" than graduates and that they were less willing to take a chance, it might be inferred that female dropouts were more withdrawn than graduates. Similarly the item "enjoys a fight",

endorsed more for male dropouts, might suggest that male dropouts were more aggressive than male graduates.

In the Havinghurst et al. study (1962), only 20% of children scoring in the top 10% on aggression graduated from high school and only 33% of children scoring in the top 10% on withdrawal were still in school at the end of grade eleven. For all extremely aggressive children, the dropout rate was 57%. This is in contrast to a drop out rate for the total sample of 35% and 17% for children rated low in aggression. A greater likelihood of aggressive students dropping out of school was also reported by Feldhusen, Thurston, and Benning (1973). They found that teacher-nominated aggressive children were six times more likely to drop out than a group of matched nonaggressive controls.

In summary poor peer relations characterized by aggression and withdrawal have been related, both retrospectively and prospectively, to a variety of emotional, behavioral, and educational problems. Aggression in childhood has been related to the clinical diagnosis of sociopathic personality, poor school grades, school failure, dropping out of school, and juvenile and adult criminality. The findings with respect to aggression are very robust considering the great many disparities in methodology in the studies cited: sample composition, rating sources, severity of the dysfunction, assessment instruments, outcome measures, and time interval. With respect to withdrawal, retrospective studies have

provided evidence of a link between childhood withdrawal and the clinical diagnosis of schizophrenia. In contrast, prospective studies have found no greater risk for schizophrenia in clinic populations of withdrawn children. The results are also equivocal with respect to indices of educational adjustment. Findings from one study (Havinghurst et al., 1962) reporting an association between withdrawal and school failure have not been replicated in another study using the same criterion of adjustment (Ledingham and Schwartzman, 1984). No studies have reported an increased risk for criminal activity for children identified as shy/withdrawn (Ensminger, Kellam and Rubin, 1983; Janes et al., 1979). It has been speculated that the less compelling results for withdrawal, as a precursor of subsequent adjustment problems, may result from the externalizing nature of the outcome measures traditionally used in the risk literature. In preliminary research findings, withdrawal has been found to be more predictive for outcome measures of an internalizing nature.

Concurrent Studies

While longitudinal studies are the ideal design for examining the predictive power of childhood aggression and withdrawal for adult adjustment, they are very costly in terms of money and manpower. One alternative to longitudinal studies are studies which examine concurrent problems associated with social difficulties. While not as powerful as longitudinal studies, concurrent studies examine the implications of

aggression and withdrawal for present adjustment. Assuming a continuity between childhood and adult behavior, studies of concurrent adjustment provide important information on the developmental course of disordered outcome.

School Samples

In the recent epidemiological study of the health of Ontario school children, ages 4-16 (Ontario Child Health Study, Offord, 1986) poor peer relations emerged as a significant risk factor. Children with few friends were 2.2 times as likely to have a psychiatric disorder (neurosis, somatization, conduct disorder, hyperactivity) as popular children. This figure is comparable to other risk factors such as subsidized housing (2.6 times), low birthweight (2.5 times), and a chronic medical condition (2.4 times). Another index of social adjustment "low participation skills" increased the risk of children for disorder 1.6 times. Due to their causal implication in poor peer relations, data from the OCHS provide indirect evidence of the strength of the risk for psychiatric disorder associated with social aggression and withdrawal.

The concurrent association between social withdrawal and internalizing problems was examined in research by Strauss, Forehand, Smith and Frame (1986). Forty-eight withdrawn children, identified by teachers on the basis of low rates of social interaction, were compared with 72 outgoing children, identified by teachers on the basis of high rates of interaction.

Peer sociometric measures included like most to play with-like least to play with, fight most nominations and peer ratings of likeability. The internalizing problems assessed were anxiety (Revised Children's Manifest Anxiety Scale; anxiety-withdrawal scale of the Revised Behavior Problem Checklist), depression (Children's Depression Inventory), self-concept (Piers-Harris), and submissiveness (submissiveness scale of the Children's Action Tendency Scale); externalizing problems assessed were conduct problems (the conduct disorder scale of the Revised Behavior Problem Checklist) and aggression (the aggressiveness scale of the Children's Action Tendency Scale). Withdrawn or low interacting children were less well liked by their peers, displayed poorer self-concepts, and were more anxious and depressed than more sociable peers. There were no significant differences between the withdrawn and outgoing groups on the basis of externalizing symptoms. The authors point out the limitation in the conclusions that can be drawn from this study. Without the inclusion of a group of children whose frequency of social interactions was normal, it is not possible to tell whether the scores of the withdrawn group on the internalizing measures were clinically significant or within normal limits. In addition, for purposes of the present study, in the absence of an aggressive comparison group, it is not apparent whether the concurrent adjustment problems associated with withdrawal were the same or different from those associated with aggression. Nevertheless, the Strauss et al. research provides tentative evidence to support the association between

withdrawal and outcomes of an internalizing, as opposed to externalizing, nature.

Clinical and High-risk Samples

The relationship between social adjustment and concurrent psychological adjustment has also been examined in clinic samples of children. Clinical studies provide evidence to support a relationship between social adjustment and psychological adjustment from the opposite perspective to the studies reviewed so far. In clinical studies the disturbed outcome is already present, as evidenced by the presence of a psychiatric diagnosis, and the researchers are attempting to discover if there is a concomitant disturbance in social relationships.

Rolf (1972; 1976) investigated the social adjustment of children of schizophrenic and neurotic mothers, and children who had been diagnosed with externalizing or internalizing problems, in comparison to a group of random and matched control children. Rolf divided the negative roles of the "Guess Who" measure of social adjustment into two categories - internalizing negative roles and externalizing negative roles. Overall, he found that all target groups were nominated for more negative roles than control children. There was a concordance between the diagnostic classification and peer ratings of negative attributes. Children with internalizing problems were nominated for more internalizing negative roles

while children with externalizing problems were nominated for more externalizing negative roles. As with other versions of Guess Who instruments it is not possible to determine the specific role of aggression or withdrawal in accounting for these findings.

While the next two studies reviewed have not looked specifically at the social behaviors of aggression and withdrawal, they are included in the review because of their association with the mental health problems examined in the present study.

In the first of these studies (Strauss, Lahey, Frick, Frame and Hynd, 1988), the peer social status of children with anxiety disorders was examined. Sixteen children, ages 6-13, who met DSM-III criteria for anxiety disorders - overanxious disorder (n=4); separation-anxiety disorder (n=3); obsessive-compulsive disorder (n=1); mixed (n=8) - were compared with 26 children with conduct disorders and 45 nonreferred children on a like most-like least - fights most peer nomination measure. While anxiety-disordered children received significantly fewer "like most" nominations than nonreferred children, they did not differ significantly on this measure from the conduct disordered children. In contrast, the conduct disordered children received more "like least" and "fight most" nominations than the other two groups (anxiety, nonreferred). Consistent with the nature of their diagnostic classification, the children in the anxious group were most likely to fall into the

socially neglected category of peer status, ie. children who are ignored by their classmates.

A second study (Asarnow, 1983) evaluated the social competence, peer status, and clinical symptomatology in 54 child psychiatric inpatients. Social competence and clinical symptomatology were assessed using the Child Behavior Checklist (Achenbach and Edelbrock, 1983); peer social status was assessed through sociometric interviews using the "like most- like least" nominations and peer ratings of likeability. Conduct disordered, attention deficit children, and depressed children with concomitant externalizing disorders were the most rejected, least accepted, and least socially competent children.

In summary, it is evident that clinical populations of children have concomitant social adjustment problems. This has been documented for clinical diagnoses of both an externalizing and an internalizing nature.

To conclude, findings from both longitudinal and concurrent studies have documented an association between social adjustment problems in childhood and a broad spectrum of adjustment problems in other areas. See Table 1 for a summary of this literature. However, the inconclusive results with regard to the risk status of withdrawn children, and the need to define the nature of the symptomatology associated with aggression and withdrawal, indicate that further research

TABLE 1
SUMMARY OF THE LITERATURE RELATING SOCIAL ADJUSTMENT TO ADJUSTMENT IN OTHER AREAS

TYPE	RESEARCHER /YEAR	ADJUSTMENT INDEX	SAMPLE	CLASSIFICATION SOURCE	MEASURES	LENGTH OF TIME	RESULTS
Long. retro.	Coven et al. 1973	Psychological (psychiatric register) school	exp = 537 control=447	Composite: interview with mother; group psychological eval- uation; classroom observation; teacher report	days absent; report card grades; achievement test scores; IQ; self-report anxiety; Class Play; Thinking About Your- Self; Teacher's Behavior Rating Scale	11-13 yrs.	Early detected vulnerable children disproportionately repre- sented in community psychiatric register; Peer judgements most sensitive predictors of later psychiatric difficulty
Long. retro.	Bower et al. 1960	Psychological (clinical diagnosis)	schizo=44 control=44 clinic	Clinical diagnosis of schizophrenic	Teacher in- terviews of H.S. students who later became schizophrenic; ratings of mental health; school records	approx. 5 yrs.	Preschizophrenic more passive; apathetic; care- less; dependent; irrespon- sible; depressed; submis- sive; anxious; less well liked by peers than controls; only 7% of preschizophrenics rated as above average in mental health compared to 52% of controls; schizo: fewer graduated; lower grades; poorer attendance
Long. retro.	Fleming & Ricks, 1960	Psychological (clinical diagnosis)	schizo=49 control=25 clinic	Clinical diagnosis (adult)	Clinic Records	6-7 yrs.	Feelings of isolation and alienation differentiated preschizophrenic and control

Long. prosp.	Morris et al., 1954	Psychological (clinical diagnosis)	n=54 internal reactors clinic	Clinical history; (child)	Interview to assess present adjustment (satisfactory, marginal, sick)	16-27 yrs.	68% of internal reactors (shy, withdrawn, anxious, fearful) classified as satisfactorily adjusted; 28% marginally adjusted; 4% sick
Long. prosp.	Michael et al., 1957	Psychological (clinical diagnosis)	n=606 clinic	Clinical history extrovert; intro- vert; ambivert	Clinical files of state psychiatric institutions and hospitals	14-29 yrs	Only 1 introvert had a diag- nosis of schizophrenic compared with 3 extroverts and 6 ambiverts
Long. prosp.	Robins, 1966	Psychological (psychiatric status)	n=524 clinic	Teacher ratings of behavior	Clinic records; Interviews; police, hospital social agency, credit bureau; school records	30 yrs.	32% of children later diag- nosed as sociopathic person- ality had been physically aggressive children Shyness/withdrawal not associated with schizo- phrenia
Long. prosp.	Janes & Hesselbrock, 1978	Psychological adult mental health status	clinic	psychiatric interview	teacher ratings	12-15 yrs.	For girls, ratings of withdrawal predictive of mental health ratings in young adulthood; both males and females aggression not associated predicatively with poorer mental health ratings after controlling for SES and IQ
Long. prosp.	Janes et al., 1979	Psychological psychiatric hospitalization	n=149 clinic males	psychiatric hospitalization	ratings of poor peer relations	12-15 yrs.	poor peer relations in childhood predictive of greater psychiatric hospitalization

Long. prosp.	Havinghurst et al., 1962	Psychological global index of school adult adjustment	n=487	global index of adult adjustment	peer nominations for aggressiveness at ages 11-15	9 yr.	r=-.24 between peer nominations for aggressiveness/initial adult adjustment; 37% of children in highest quartile of aggression had poor adult adjustment
Long. prosp.	Rubin & Mills, 1988	Psychological withdrawn passive active	observation	teacher and peer ratings of social behavior; perceived competence, loneliness, depression	5 yrs.	passive withdrawal related to self-report depression and loneliness	
Long. prosp.	Kupersmidt, 1983	Behavior (delinquency)	n=112 school	delinquency records	fights most nominations		peer ratings of aggression predicted subsequent delinquency
Long. prosp.	Roff & Wirt, 1984	Behavior (delinquency)	n=2453 school	delinquency records	childhood behavior ratings; pre-delinquency scale; ratings of family disturbance; social class of school	gr. 3-6 to young adult	childhood aggression the most prominent antecedent of delinquency for males;
Long. prosp.	Farrington, 1978	Behavior (delinquency)	n=411	criminal records	teacher ratings of aggression at 8, 10,12, 14 yr.; self-ratings at ages 16 and 18	14 yrs.	aggression related to severity of delinquency 70.4% of violent delinquents had been rated by teachers as aggressive compared with 23.3% of non-delinquents

Long. prosp.	Havinghurst et al., 1962	Behavior (delinquency)	n=487 school	social adjustment based on "Who Are They" and teacher ratings (Behavior Description Chart) gr. 6, 7, 9	delinquency	9 yrs.	83% of boys who scored in the top 5% on aggression later committed serious to very serious juvenile offences
Long. prosp.	Janes et al., 1979	Behavior (contact with law)	n=149 clinic	interview	teacher ratings of behavior	12-15 yr.	fighting not related to contact with law; bad conduct associated with conviction and jail sentence
Long. prosp.	Feldhusen et al., 1973	Behavior (contact with law)	school	teacher nomination of aggression	Delinquency records		aggressive children twice as likely as nonaggressive children to have later police contact; seven times as likely to appear in juvenile court; ten times as likely to have a later conviction.
Long. prosp.	Kuhlen & Collister, 1952	Educational (drop out)	6th gr.=226 9th gr.=244 school	social adjustment based on "Guess Who" measure	school history 1) graduated 2) dropped out 3) moved	6-7 yrs.	pupils who dropped out of school were nominated by peers for more negative items (enjoy a fight; unfriendly) than pupils who graduated from H. S.
Long. prosp.	Feldhusen et al., 1971	Educational (achievement)	n=384 gr. 3, 6, 9 school	teacher nominations of aggressive and sociable	teacher grades; standardized test scores	5 yrs.	on all measures of academic adjustment, aggressive children performing at lower mean levels
Long. prosp.	Ledingham & Schwartzman, 1984	Educational (failure)	aggress=122 with=150 agg/with=182 control=299	Pupil Evaluation Inventory	school failure; special class placement	3 yrs.	Aggressives experienced more school difficulties than withdrawn or controls

Long. prosp.	Feldhusen et al., 1973	Educational (drop out)	school	Teacher nominations of aggression	school drop out	Aggressive children six times as likely to drop of school
Long. prosp.	Havinghurst et al., 1962	Educational (drop out; failure)	n=487 school	Social adjustment based on "Who Are They" and teacher ratings (Behavior Description Chart) gr. 6,7,9	drop out; rank in grade 11	9 yr. Twice as many aggressives and three times as many withdrawn children failed at least one grade in school; 67% withdrawn and 80% aggressive children dropped out of high school
Con- current	Offord, 1986	Psychological internalizing/ externalizing disorders	n=3294 4-16 yrs.	Behavior checklist	parent, teacher and self-report	na Children with few friends were 2.2 times more likely to have a psychiatric disorder than popular children
Con- current	Strauss et al. 1986	Psychological	nonreferred withdrawn=48 outgoing=72	low frequency of peer interaction	peer sociometrics; observation; Piers- Harris; CDI; RCMAS; Children's Action Tendency Scale; Teacher ratings (Revised Problem Checklist)	Significant group differences on measures of anxiety, self-concept depression and sub- missiveness scale of CATS

Con- current (clinical)	Rolf, 1976	Social Adjust. (negative roles Class Play)	n=45 children psychiatrically ill mothers n=39 clinic externalizers n= 24 clinic internalizers matched & random controls	Clinical diagnosis	Class Play: Exter. Neg. Score Inter. Neg. Score Total Neg. Roles Total Pos. Role Diff. Rank Score	na	Target groups ranked lower on positive roles and higher on negative roles than controls; clinic children with externalizing problems ranked higher on externalizing nega- tive roles than controls; clinic children with internalizing problems ranked higher on internaliz- ing negative roles than con- trols; externalizers (males & females ranked highest on total negative roles while male internalizers ranked lowest; all target groups except children of internal- izing mothers received sig- nificantly lower and more negative ranks than controls
Con- current (clinical)	Strauss et al., 1988	Social adjust. (social status)	clinic out- patients: anxious=16 conduct=26 nonreferred control=45	Clinical diagnosis	like most/like least /fights most nomin- ations	na	Anxious group liked signif- icantly less than controls; conduct disorder group received most like-least and fight most nominations; anxious group lowest social impact scores
Con- current (clinical)	Asarnow, 1988	Social adjust. and clinical symptomatology	clinic in- patients: depress=14 external=17 dep/ex =12 other=11	Clinical diagnosis	sociometric interviews; Child Behavior Checklist	na	Children with externalizing disorders or concomitant depressive and externalizing disorders were the most rejected, least liked, and least socially competent

on this topic is warranted. Research is also required to identify factors which may moderate the effects of social aggression and withdrawal on subsequent outcome measures as only a small percentage of aggressive or withdrawn children have been documented to develop disordered outcomes (Cowen et al., 1973).

PRESENT STUDY

RESEARCH OBJECTIVES

Under the general aim of examining the relationship between social problems and concurrent mental health problems, the present study had the following objectives:

1. to examine the risk status for mental health problems of children nominated by their peers as aggressive or withdrawn
2. to determine if groups of peer-identified aggressive and withdrawn children could be differentiated on the basis of internalizing versus externalizing symptomatology
3. to examine the effects of self-esteem and social support on the relationship between social problems and concurrent mental health

The present research examined the mental health status of groups of children identified by their peers as aggressive,

withdrawn, sociable, or average in their sociability. Children were characterized as aggressive based on a pattern of behavior that included physical aggression, disruptive behavior, destruction of property, temper tantrums, and bothering other children. The identification of withdrawn children was based on a pattern of behavior characterized by sadness, hypersensitivity, and social isolation. Sociable children were those with leadership skills, a good sense of humor, made friends easily, were happy, and helped others. Children average in their sociability were those who did not meet the criteria for inclusion in the other three groups.

The research was designed to examine whether children identified by their peers as aggressive or withdrawn were at greater risk for mental health problems than sociable or children average in their sociability. Mental health problems were operationally defined as elevated scores on the mental health indices used in the present study. While the research did not directly assess the prognostic implications of aggression and withdrawal for adult disorder, an investigation of the relationship between peer relations and concurrent mental health, at a stage of development intermediate between childhood and adulthood, provides important information on the developmental course of mental health problems.

The literature linking childhood peer relations problems to subsequent maladjustment is quite robust for aggression but inconclusive with regard to withdrawal. An important aspect

of the present research was to examine the source of the discrepancy with regard to the risk status of withdrawn children. Specifically Rubin's (1985) hypothesis that the reason for the discrepancy has been the nature of the outcome measures used to assess the prognostic implications of withdrawal was tested. Two of the outcome measures traditionally used to assess long term adjustment - delinquency and adult criminality - are more related conceptually to aggression than they are to withdrawal. Rather than outcomes of an externalizing nature, withdrawn children may be more at risk for developing internalizing problems, such as anxiety and depression. In support of this viewpoint Rubin and Mills (1988) found that grade two scores on an observational measure of passive withdrawal significantly predicted grade 5 scores on self-reported depression and loneliness. Similarly Strauss, Forehand, Smith, and Frame (1986) reported that children identified as withdrawn on the basis of low rates of interaction displayed greater numbers of internalizing, but not externalizing problems, relative to sociable children. However to date there is no research which has compared groups of peer-identified withdrawn and aggressive children on an internalizing-externalizing dimension of behavior.

A third issue to be addressed in the present research concerns the identification of factors which may moderate the effects of childhood aggression and withdrawal. The two variables selected for study were self-esteem and social

support. Self-esteem was selected because of its documented association with the variables under study (Piers, 1969; Coopersmith, 1967; Harter, 1988). Children nominated as aggressive or withdrawn but who feel good about themselves may not be as vulnerable to mental health problems as are children who do not like themselves. The selection of social support was based on the large body of adult literature showing its role as a mediator in the relationship between stress and illness (Sarason, Sarason, Patter III, and Antoni, 1985; Cohen and Wills, 1985). Conceivably, in the face of life's stressors, aggressive and withdrawn children who have no one who cares how they feel or what happens to them are at greater risk for disordered outcome than are children who have a supportive family and/or friends. In addition to the conceptual reason for including a measure of social support, there was also a very practical reason. The restriction of peer nominations to the immediate classroom could have the effect of identifying a child as aggressive or withdrawn who would, in another context, be well accepted. The inclusion of a measure of social support controls for this possible bias in the assessment methodology.

The target population for the present study consisted of grade 7 students in regular class placement. Grade 7 students were chosen for study for several reasons relevant to the issues under investigation. First, research (Ledingham and Younger, 1985) has indicated that grade 7 students possess the

cognitive capacity necessary to make the discrimination between the behavioral categories of aggression and withdrawal. They found that while younger children discriminated along a unidimensional continuum of deviant-nondeviant, the ratings of older children were more differentiated. In addition multidimensional scaling used to provide a spatial representation of the perceived similarity of items of the Pupil Evaluation Inventory, a measure similar in format to the one used in the present study, revealed that the ratings of grade 7 students closely paralleled those made by teachers.

A second reason for selecting grade 7 students was that students at this grade level are developmentally at the age when the peer group is beginning to exert pressure to conform to "normative standards" of dress and behavior. For this reason, peers at this stage of development become more acutely aware of those who deviate from group norms. In addition grade 7 students are beginning to assert their independence and in so doing often alienate significant adults in their life. The peer group then becomes the primary source of emotional support. Finally, in the Carleton Roman Catholic School Board, grade 7 is a year of transition for students. They are moving from the relatively secure environment of the neighborhood elementary school (population approximately 250 students) to the more threatening environment of the high school with a population of approximately 1200 students. They

are the youngest, the smallest, and the newest members of the student body and as such are often the butt of jokes and pranks by older students. In this environment, social relationships form an important support network. Based on the large data base which has linked stress and psychological maladjustment (Coddington, 1972; Anisman and Zacharko, 1982; Andrews, Tennant, Hewson, and Shannel, 1978), grade 7 appears to be an opportune time to study the relationship between social adjustment and mental health problems.

The social adjustment of grade 7 pupils was classified along three dimensions - sociability, aggression, and withdrawal - on the basis of peer nominations for roles in an imaginary class play (The Revised Class Play - Masten, Morison, and Pellegrini, 1985). There are several advantages to the use of peers as assessors. Since a child's score is based on multiple raters, the effects of individual biases inherent in a single rating source are minimized. In addition, peer nominations are based on behaviors observed across many settings and under different sets of circumstances. The behavior is also interpreted from the perspective of children of the same age, so that it is not subject to distortion by adult expectations and standards. The validity of peer data as an assessment source is supported by research by Cowen et al. (1973), in which peer judgements of social adjustment were found to be the most sensitive predictors of later psychiatric difficulty.

Children were identified as either socially well adjusted (sociable) or socially maladjusted (aggressive, withdrawn) if their scores on the relevant factor were 1.5 standard deviations above the classroom mean and less than or equal to .5 standard deviations above the mean on nonrelevant factors. A criterion of 1.5 standard deviations was selected to ensure that the target groups so classified would be deviant enough that study results could be attributed to replicable differences between the mental health of socially adjusted versus socially maladjusted children. By selecting only those children meeting the cut-off score on nonrelevant factors of less than or equal to .5 standard deviations above the mean, the groups would be relatively independent and would allow for an examination of the relationship between the nature of the social adjustment problem (aggression, withdrawal) and the nature of the concurrent mental health problems (internalizing, externalizing). In a pilot study on the affective adjustment of grade 5 children with social problems (Vargo, 1988; Appendix A), a less stringent criterion of one standard deviation above the mean was employed. Using this criterion, the symptomatology of the aggressive and withdrawn groups could not be differentiated.

The second stage of the study assessed the concurrent mental health of those children identified by peer nominations in the screening stage of the study as either socially adjusted (sociable) or socially maladjusted (aggressive or withdrawn).

The variables chosen for study formed a dichotomy of symptoms of an internalizing nature - anxiety, depression, social withdrawal - and those of an externalizing nature - hostility, aggression, delinquency. This dichotomy was chosen to correspond to the difference in the two types of peer-identified socially maladjusted children - aggressive and withdrawn. Both self-report and teacher ratings of behavior were used to gather information on the mental health of peer-identified aggressive and withdrawn children. The use of teacher data provided information from an adult perspective and parallel items on the teacher (Teachers' Report Form - Edelbrock and Achenbach, 1984) and self-report scale (Youth Self-Report - Achenbach and Edelbrock, 1987) permitted an assessment of the relative predictive power of the two data sources.

In addition to the externalizing and internalizing variables, the role of self-concept and social support in the relationship between the social attributes of aggression and withdrawal and internalizing and externalizing symptoms was examined. This was an important aspect of the research because the previous literature had indicated that not all aggressive and withdrawn children develop disordered outcomes.

Thus, the present study addressed several important issues regarding concurrent problems associated with children's social adjustment. By assessing the concurrent mental health of socially deviant children, empirical evidence was provided

concerning the risk status of children identified as aggressive or withdrawn. Further, by delineating the nature of the symptomatology associated with the two types of social adjustment problems (either aggression or withdrawal) future researchers were provided with direction in the choice of outcome measures to assess the prognostic implications of social problems for psychopathology. Finally, by examining the role of self-concept and social support, information was collected on how these variables are related to concurrent mental health problems.

METHODOLOGY

Sample

The screening sample consisted of 537 grade 7 students in 27 classes from five separate schools (Carleton Roman Catholic School Board) and two public schools (Carleton Board of Education). Four of the schools were situated in suburban centers, one was in an urban center and two were in rural areas. Subjects were predominantly from Caucasian middle class families. Students were in regular class placement; grade 7 students in self-contained special education classes were excluded due to the possible confounding of concomittant emotional and behavioral problems associated with their learning disability. To be included in the screening sample, classes had to have a parental consent return rate of 67% or greater. While this criterion substantially reduced the number

of participants (from 914 to 537), it was felt to be necessary due to the sociometric nature of the screening instrument. As only the names of those children with parental consent were available for nomination for the various behavioral descriptions, it was felt that a sample smaller than two thirds of the class would not provide a wide enough range of behavior to ensure the validity of the peer nominations.

Of the screening sample of 537 students, 131 students (24%) met the designated cut-off scores on the screening measure and participated in the psychological assessment stage of the research. Thirty-four children were identified by their peers as sociable; 31 as aggressive; 34 as withdrawn; and 32 as average in sociability. There were 75 males and 56 females in the sample (Table 2 provides this information in tabular form). Four children were absent for both days of testing and another 5 students were absent for one of the two testing periods.

Instruments

The Revised Class Play (RCP) (Masten, Morison, and Pellegrini, 1985).

The RCP (Appendix B) is a 30 item peer nomination inventory. Children are asked to pretend they are directors of an imaginary class play and to cast their peers into a variety of positive and negative roles. Each role is a behavioral description such as, "a person who is a good leader", "someone who is often left out", "somebody who picks on other kids".

Table 2 - THESIS PARTICIPANTS

Board	Consents distributed	Consents returned	Participated Phase 1	Participated Phase 2
C.R.C.S.B.	1184	691 (58%)	425	103 (79%)
C.B.E.	354	223 (61%)	112	28 (21%)
TOTAL	1538	914 (59%)	537	131

SAMPLE CHARACTERISTICS

Group	Males	Females	Total
Sociable	15	19	34
Aggressive	22	9	31
Withdrawn	22	12	34
Average	16	16	32
TOTAL	75	56	131

Pearson Chi-Square = 6.239, n.s.

The instrument is scored to reflect three dimensions identified through factor analysis - sociable/leadership, aggressive/disruptive, and sensitive/isolated. A child's score is computed as the total number of votes received for the items which constitute a relevant factor.

The psychometric properties of the scale were examined for a sample of 612 elementary school children in grades 3 to 6 (Masten, Morison, and Pellegrini, 1985). The three factors were found to be internally consistent ($r=.81$ to $r=.95$); to be consistent across sexes; and stable over time (range $r=.77$ to $r=.87$ for a 6-month period). Concurrent validity of RCP scores with teacher-rated behavior was documented. Evidence of convergent validity was supplied by a significant relationship with the constructs of academic competence and intelligence, while support for the discriminant validity of the scale was provided by a nonsignificant relationship between factor scores and socioeconomic status (Masten, Morison and Pellegrini, 1985).

The RCP used in the present study represents a modified version of the original RCP. In a pilot study of 270 grade 5 students (Vargo, 1988), factor analysis confirmed the basic factor structure of the scale, but indicated that the sociability/leadership factor was actually composed of two item clusters (factors) - those that denoted sociable qualities ("someone who has many friends", "someone who makes new

friends easily") and those that denoted courteous, polite behavior ("someone who waits their turn"; "someone who plays fair"). While the latter items are also important for sociability they were omitted for the present study due to their possible confounding of sociable and withdrawn children. In addition, items on the aggressive and withdrawal scales were supplemented with corresponding items from a similar peer nomination inventory, the Pupil Evaluation Inventory (Pekarik et al., 1976). It was anticipated that increasing the length of the scales would increase their reliability, and indirectly their validity. With these modifications the instrument used in the present study consisted of 30 items (10 items per factor) presented in a "fill in the blank format". Students were directed to nominate from one to three of their classroom peers who best suited each behavioral descriptor.

Evidence to support the validity of the modified version of the RCP used in the present study comes from significant correlations with teacher- and self-ratings on theoretically-related scales (See Table 3). The sociable factor was significantly related to the popularity scale of the Piers-Harris Children's Self-Concept Scale ($r=.4448$, $p<.001$); the aggressive factor was related to both the aggression and externalizing behavior problems scales of the Teachers' Report Form ($r=.425$, $p<.001$ and $r=.366$, $p<.001$), to teacher ratings of behavior on the adaptive functioning scale (TRF $r=.4467$, $p<.001$), and to self-reported physical assault on the HIC-R ($r=.3258$, $p<.001$);

TABLE 3 - VALIDITY COEFFICIENTS FOR REVISED CLASS PLAY

VARIABLES	SOCIAL GROUPS		
	Sociable	Aggressive	Withdrawn
RCP			
Sociable	1.0000		
Aggressive	-0.2257*	1.0000	
Withdrawn	-0.5549**	-0.2634*	1.0000
HIC-R			
Assault	-0.1471	0.3258**	-0.2530
Indirect Hostility	-0.1061	0.0900	0.0210
Irritability	-0.0941	0.0656	0.0388
Negativism	-0.0833	0.2043	-0.0924
Resentment	-0.2505*	-0.0145	0.3794**
Suspicion	-0.2413*	-0.1679	0.4415**
Verbal	-0.0650	0.1314	0.0645
Overt Hostility	-0.1084	0.2458*	-0.0092
Covert Hostility	-0.2271*	-0.0456	0.3348**
PIERS-HARRIS			
Behavior	-0.1310	0.1421	0.0644
Intellect	-0.2334*	-0.1038	0.3431**
Appearance	-0.2695*	-0.2121	0.4314**
Anxiety	-0.1687	-0.0187	0.4274**
Popularity	-0.4448**	-0.1697	0.6289**
Happy	-0.1665	0.0001	0.2669*
Total	-0.3051**	-0.1874	.5288**
RCMAS	-0.2845*	-0.1227	0.41**
CDI	-0.2327*	-0.1280	0.412**
SOCIAL SUPPORT SCALE	-0.2251*	-0.1549	0.3827**
YOUTH SELF-REPORT			
Depression	-0.1289	-0.1582	0.3049**
Aggression	0.0186	0.1840	-0.1932
Delinquency	-0.0245	0.0982	-0.0658
Internalizing	-0.1420	-0.1398	0.3060
Externalizing	0.0000	0.1550	-0.1412
TEACHER'S REPORT FORM			
Behavior	-0.2221	0.4467**	-0.0553
Happy	-0.3279**	0.0098	0.495**
Academic	-0.3302**	0.1812	0.2726
Social Withdrawal	-0.2866**	-0.1145	0.352**
Anxiety	-0.1696	-0.0732	0.2935**
Aggression	-0.1488	0.4247**	-0.1392
Inattentiveness	-0.3427**	0.3191**	0.2178*
Internalizing	-0.2541*	-0.9020	0.3624**
Externalizing	-0.215*	0.3655**	-0.3160

** p<.001 *p<.01

the withdrawn factor was significantly correlated with teacher ratings of anxiety ($r=.2935$, $p<.001$), social withdrawal ($r=.352$, $p<.001$), internalizing behavior ($r=.3624$, $p<.001$), and self-ratings of depression (CDI $r=.412$, $p<.001$) and anxiety (RCMAS $r=.41$, $p<.001$).

Hostility Inventory for Children- Revised (HIC-R) (Vargo, 1988).

The HIC-R (Appendix C) is self-report measure of hostility, adapted from the Buss-Durkee Hostility-Guilt Inventory (Buss and Durkee, 1957). The scale measures the clinical dimensions of physical aggression, indirect aggression, irritability, negativism, resentment, suspicion, and verbal aggression. An earlier version of the measure (HIC) was revised on the basis of feedback obtained in a pilot study conducted with grade 5 students (Vargo, 1988). Items that the examiner noted the children found ambiguous e.g. "I get into as many fights as the next person" where children wanted to know who the next person was were either revised or omitted. Additional questions were written to give all seven scales an equal number of items (5). The rating definitions were changed to read: never true (1); seldom true (2); often true (3); always true (4). In addition, when the instrument was piloted it became apparent that the positively worded items, included to control for response bias ("I don't hate anybody") were misinterpreted, so for reasons of clarity all items were worded so that endorsement would indicate the presence of hostility.

The revised Hostility Inventory for Children consists of 35 items presented in a four choice format. The scale is scored in terms of seven dimensions of hostility - physical assault, indirect aggression, irritability, negativism, resentment, suspicion, and verbal assault - with higher scores reflective of greater hostility. In addition to the seven hostility subscale scores, two summary scores were calculated based on the results of factor analysis. A two factor solution of HIC-R scores (see Appendix D) accounted for 39% of the variance (factor 1 21%; factor 2 18%). The first factor consisted of items on the physical assault, indirect aggression, negativism and verbal aggression subscales and was named overt hostility. Items on the irritability, resentment and suspicion subscale formed the second factor which was named covert hostility. Seven items (2 overt and 5 covert) crossloaded $>.30$. Overt and covert hostility summary scores were calculated for each individual by adding up the scores for the items comprising each factor.

The psychometric properties of the revised HIC were examined in the present study. Item-summary scale (overt, covert) correlations were in the range $r=.274$ to $r=.804$ (see Appendix E). The reliability of the measure was assessed by readministering the instrument 12 weeks after the first administration to a sub-sample of 51 subjects (27 males; 24 females; 16 sociable; 11 aggressive; 14 withdrawn; 10 socially average). Correlations between scores at the two sessions indicated that HIC-R scores were relatively stable (physical

aggression $r=.834$; indirect aggression $r=.685$; irritability $r=.699$; negativism $r=.756$; resentment $r=.634$; suspicion $r=.701$; verbal aggression $r=.637$; overt hostility $r=.839$; covert hostility $r=.752$).

Evidence for the validity of the HIC-R can be found in significant correlations with related measures (See Table 4). All seven scales (physical aggression, indirect aggression, irritability, negativism, resentment, suspicion, and verbal aggression) were positively correlated $p<.001$ with other self-report measures of behavior (behavior factor Piers-Harris Children's Self-Concept Scale; aggression and delinquency factors of the Youth Self-Report Inventory). In addition, the physical assault subscale was positively related to peer nominations for aggression ($r=.3109$, $p<.001$) and, along with the negativism scale, to teacher ratings of behavior on the adaptive functioning scale of the TRF (physical assault $r=.3109$, $p<.001$; negativism $r=.3606$, $p<.001$) but not to teacher ratings of aggression or delinquency. While both the overt and covert hostility scales were related to externalizing and internalizing behaviors, the overt scale had the highest correlation with externalizing behaviors and the covert scale had the highest correlation with internalizing behaviors (See Table 4).

Support for the discriminant validity of the overt and covert summary scores was provided in the present study by significantly higher mean scores on the overt scale by children nominated as aggressive when compared with children

50

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
84

nominated as sociable ($p < .027$). On the covert scale, withdrawn children scored significantly higher than aggressive ($p < .016$), sociable ($p < .001$) and socially average ($p < .003$) children (See Table 5, pg. 67).

Revised Children's Manifest Anxiety Scale (RCMAS) (Reynolds and Richmond, 1979).

The RCMAS (Appendix F) is a self-report measure of the frequency of symptoms of anxiety in children. It is based on a trait theory of anxiety with scale scores interpreted as representing an individual's position on a continuum of the personality trait, anxiety, ranging from normal to pathogenic. The RCMAS consists of 27 anxiety items and 9 lie scale items arranged in a "yes - no" format. A child's score is the sum of the items rated "yes".

For a sample of 329 school children (grades 1 through 12), the point-biserial correlation of each item with the total test score for the anxiety items ranged from .40 to .60, while KR_{20} reliability estimates for the scale were in the range .83 to .85. Correlations between the RCMAS and the trait scale of the Spielberger State-Trait Anxiety Inventory for children ranged from .85 ($p < .001$) (Reynolds and Richmond, 1980) to .42 (Stavarakaki and Vargo, 1985).

Children's Depression Inventory (CDI) (Kovacs, 1983).

Of the current self-report measures of depression, the CDI (Appendix G) was selected as its psychometric properties have been the most thoroughly investigated. The CDI, a modification of the Beck Depression Scale for adults, is a self-report instrument designed to assess affective, cognitive, motivational, and somatic symptoms of depression for the two week period preceding administration. As a measure of depressive symptomatology, it is suitable for both group and individual administration. The 27 items are arranged in a three-choice format identifying normal behavior, some pathology, and clinically significant pathology. The items are counter-balanced with regard to severity to control for response set and are scored 0 to 2 in the direction of increasing symptom severity.

Indices of reliability (coefficient alpha; item total score correlations) indicate low to moderate internal consistency. Test-retest estimates range from .43 for one month (Kovacs, 1983) to .84 for a nine week interval (Friedman, Mieztis, Butler, and Blanchard, 1978). There is evidence for both concurrent validity of the scale ($r=.65$ with the Children's Manifest Anxiety Scale; $r=.66$ with the Piers-Harris Self-Concept Scale) and construct validity of the scale ($r=.42$ with clinical ratings of the severity of depression) (Kovacs, 1983). The CDI has been found to discriminate significantly between clinical and normal samples (Saylor, Finch, Spirito, and Bennett, 1984) and between clinically depressed and nondepressed

groups (Kazdin et al., 1983; Cantwell and Carlson, 1983; Hersberg, Carlson, Cantwell, and Strober, 1982).

Youth Self-Report Scale (YSR) (Achenbach and Edelbrock, 1987).

The YSR (Appendix H) is designed to obtain 11- to 18-year olds' reports of their own competencies and problems in a standardized format. The 112 items are rated on a 0-2 response scale and scored on the basis of several narrow band scales - depressed, unpopular, aggressive, delinquent, somatic complaints, thought disorder for both sexes and an additional scale - self-destructive/identity problems - for males. Only the depressed, aggressive, and delinquent narrow band factors were used in the present study. As well there are two broad band scales - internalizing and externalizing.

One week test-retest reliabilities for the factor scores ranged from a low of $r=.39$ (thought disorder) to a high of $r=.87$ (broad band externalizing scale). Eight week test-retest reliability coefficients were considerably lower ranging from $r=.28$ (aggressive) to $r=.67$ (total problems). A study comparing the responses of 715 adolescents referred for mental health services and 779 demographically similar nonreferred adolescents found that clinic patients' self-ratings on 89 of 102 of the behavior problem items were significantly higher than those of nonreferred subjects (Achenbach and Edelbrock,

1987). For both sexes the most discriminating item was "I can't get my mind off certain thoughts" while the item "I don't get along with other kids" also had high discriminability.

Due to the fact that the number of items for factors of the same name differ for males and females, factor scores were standardized within each sex and these standardized scores were used in all subsequent analyses.

Teachers' Report Form of the Child Behavior Checklist (TRF)
(Achenbach and Edelbrock, 1986).

The TRF (Appendix I) is designed to obtain teachers' ratings of the behavioral problems of children aged 4 through 16 for the two months preceding completion of the checklist. Current school performance is rated on a 5 point scale; adaptive functioning on a 7 point scale, and behavior problems on a 0-2 point scale. The TRF is scored on the basis of several narrow band factors for each age and sex grouping, and two broad band factors - internalizing and externalizing. The scales were standardized based on TRFs completed on 1,100 randomly selected children attending regular school classes. Stability coefficients for behavior problem scales range from 0.89 (1 week to 0.64 (4 months). The scale has been shown to significantly discriminate between demographically matched samples of clinically referred and nonreferred children.

Due to the fact that the number of items for factors of the same name differ for males and females, factor scores were

standardized within each sex and these standardized scores were used in all subsequent analyses. In order to be consistent with other measures, scoring of the teacher ratings on the adaptive functioning scales (behavior, happiness, and school performance) was reversed so that higher scores were indicative of greater pathology.

Piers-Harris Children's Self-Concept Scale (Piers, 1969)

The Piers-Harris Self-Concept Scale (Appendix J) is an 80 item scale, presented in a forced choice (yes - no) format, which is designed to assess how children feel about themselves. Factor analysis of the self esteem scores of 457 grade 6 children have yielded six interpretable factors - behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, and happiness and satisfaction (Piers, 1969). A child's score is the sum of positive responses for each scale. In order to be consistent with the other measures used in the study for which higher scores were reflective of greater pathology, responses for the Piers-Harris Self-Concept Scale were recoded so that higher scores were indicative of lower self-esteem.

Reliability estimates for internal consistency of the Children's Self-Concept Scale are in the range .78 to .93 (KR_{21}). Test-retest stability estimates for a four month period are reported to average .72 (Piers, 1969). Construct validity has been established by studies which have reported more

negative self attitudes manifested by institutionalized retardates when compared with normals of the same chronological or mental age (Piers and Harris, 1964) or with noninstitutionalized retardates (Gorlow, Butler and Guthrie, 1963). An inverse relationship with scores on the Children's Manifest Anxiety Scale has been reported ($r = -.54$ to $r = -.69$), with self esteem increasing as anxiety symptoms decreased (Millen, 1966). Documented correlations between self esteem and intelligence and self esteem and achievement have been variable, ranging from nonsignificant to $r = .36$ (intelligence) and $r = .43$ (achievement) (Piers, 1969). In the present study, self ratings on the intellectual and school status factor of the Self-Concept Scale were found to be moderately related to teacher ratings of school performance ($r = .376$, $p < .001$).

Social Support Scale (Vargo, 1988)

The Social Support Scale (Appendix K) is a 25 item scale designed to assess children's peer and family social support systems. It was based on adult measures of social support (for a review of social support measures see Heitzmann and Kaplan, 1988). Questions such as "My family shows interest in what I have to say" are answered on a continuum ranging from always true to never true. A child's score is the sum of responses for all items of the scale, with higher scores indicating lower social support.

The psychometric properties of the Social Support Scale were examined in the present study. Item-total score correlations were in the range $r=.335$ to $r=.723$ (See Appendix L). Test-retest reliability for a 12 week interval was $r=.87$. The measure was significantly correlated with all measures used in the study, with the exception of teacher ratings of anxiety, aggression, and inattentiveness (Appendix M).

Design

Grouping Variable:	Peer-identified social adjustment (RCP)
Internalizing Variables:	Self-reported covert hostility (HIC); anxiety (RCMAS); depression (CDI, YSR); internalizing behavior (YSR); Teacher reported anxiety, social withdrawal and internalizing (TRF)
Externalizing Variables:	Self-reported overt hostility (HIC-R); delinquency, aggression and externalizing behavior (YSR) Teacher reported aggression, inattentiveness externalizing behavior (TRF)
Moderating variables:	Self-Concept and Social Support

Procedure

Parental consents (See Appendix N) were distributed to all grade 7 students in the Carleton Roman Catholic School Board (n=1184) and to grade 7 students in two schools in the Carleton Board of Education (n=354). Of the total number of consents distributed (n=1538), 914 or 59% were returned. Fifty-nine percent of the returned consents (n=537) met the criterion of a 67% or greater classroom return rate.

A modified version of the Revised Class Play (see instruments) was administered to students in 27 classrooms (C. R. C. S. B.= 22 classrooms; C. B. E. = 7 classrooms). Students were instructed to select, from the accompanying list of participating children, up to three peers who matched the behavioral descriptor for each item, and to write the respective code number(s) in the space provided. If the descriptor did not fit anyone in the class they were advised to leave the item blank. In addition they were told not to choose themselves for any of the descriptors. (See Appendix O).

The coded names by class were entered into a computer scoring program which tallied the frequency with which each person had been nominated for each item. The program then calculated each individual's standardized score for three factors - sociable (10 items), aggressive (10 items), and withdrawn (10 items). Based on standardized factor scores, four groups of

children (n=131) were selected for the second stage of the research.

- . **sociable (n=34)** - students whose factor score was 1.5 standard deviations or greater above the mean on the sociable/leadership factor and whose scores on the aggressive/disruptive and sensitive/isolated factors did not exceed .5 standard deviations
- . **aggressive (n=31)** - students whose factor score was 1.5 standard deviations or greater above the mean on the aggressive/disruptive factor and whose scores on the sociable/leadership and sensitive/isolated factors did not exceed .5 standard deviations
- . **withdrawn (n=34)** - students whose factor score was 1.5 standard deviations or greater above the mean on the sensitive/isolated factor and whose scores on the sociable/leadership and aggressive/disruptive factors did not exceed .5 standard deviations
- . **average (n=32)** - students whose factor scores on the sociable/leadership, aggressive/disruptive and sensitive/isolated factors ranged from .5 standard deviations above the mean to .5 standard deviations below the mean

A list of students meeting the criterion for inclusion in stage two of the research was sent to the principal of each school and

arrangements were made to administer the battery of research instruments (6) on two consecutive days. The instruments were administered to small groups of from 4 to 18 students by a research assistant blind to the social group membership of the participants. A counter-balanced order of presentation was used to control for carry-over effects.

At the time of test administration, homeroom teachers were given copies of the Teachers' Report Form and asked to complete one for each participating child in their class (from 3 to 7 pupils) (see Appendix P). An honorarium of \$4/pupil was paid to each teacher to compensate them for their time. Only two teachers did not participate.

In order to assess the reliability of the HIC-R and the Social Support Scale, a sub-sample of 51 students was readministered the two instruments approximately 12 weeks after the first administration. The correlation of item responses at time 1 and time 2 was calculated.

Data Analyses

Test protocols were scored, and where applicable, factor scores were calculated. The data were analyzed using two statistical programs, SYSTAT (Wilkinson, 1987) for the McIntosh computer, and SPSS/PC (SPSS Inc., 1988) for the IBM personal computer. A variety of statistical analyses were used to analyze the data with reference to the three questions posed by the study. The first research question was whether children

nominated by their peers as socially maladjusted, either aggressive or withdrawn, manifest symptoms indicative of concurrent mental health problems. This research question was examined by a series of multivariate analyses of variance comparing the scores of aggressive and withdrawn children to children nominated as sociable or average in their sociability.

The second issue to be investigated addressed the nature of the concurrent mental health problems experienced by the two groups of socially deviant children. A series of MANOVAs compared the scores of aggressive and withdrawn children on the internalizing and externalizing variables. In addition a discriminant function analysis using summary scores for the various measures was conducted to examine which were the most powerful variables in distinguishing between aggressive and withdrawn children.

The role of self-esteem and social support in the relationship between social and mental health problems was the third issue to be examined in the present study. This was investigated by using a median split ($n=131$) to divide the aggressive and withdrawn groups into subgroups based on self-esteem (median 19) or social support (median 42). In a series of MANOVAs the mean scores of high versus low self-esteem and high versus low social support subgroups were compared.

In analyses where summary scores were used, mean scores (by social group and sex) were substituted for missing data in cases where one of the subscale scores was missing.

This was done in order to maximize the number of subjects for the analyses. It was not done in the case where the subject had been absent on the day of the test administration or if the teacher had not completed the TRF.

RESULTS

Research Question: Are peer-identified aggressive and withdrawn children at risk for concurrent mental health problems?

This question was addressed in a series of multivariate analyses of variance (separate MANOVAs for each measure) using social group as the independent variable and factor scores as dependent variables. Where the overall multivariate effect was significant, post-hoc analyses were performed to determine significant group differences for a) aggressive vs. sociable; b) aggressive vs. socially average; c) withdrawn vs. sociable; d) withdrawn vs. socially average. The conventional .05 level of significance was adopted.

Results of the multivariate analyses of variance provided an affirmative answer to the question of whether peer-identified aggressive and withdrawn children manifest symptoms indicative of concurrent mental health problems (See Table 5). When compared with the sociable group, aggressive children

TABLE 5-DESCRIPTIVE STATISTICS/RESULTS OF POST-HOC ANALYSES FOLLOWING SIGNIFICANT MANOVA

VARIABLE	SOCIAL GROUPS BASED ON FACTORS OF REVISED CLASS PLAY			
	SOCIABLE (a)	AGGRESSIVE (b)	WITHDRAWN (c)	AVERAGE (d)
HOSTILITY INVENTORY				
Physical Assault	9.334(3.451) b	12.483(4.380) a;c;d	10.063(3.131) b	10.379(3.923) b
Indirect Hostility	8.469(2.342)	9.379(2.527)	9.065(2.032)	9.276(2.902)
Irritability	8.219(2.599)	9.107(2.615)	9.065(2.607)	8.862(2.825)
Negativism	10.125(2.780)	11.414(3.018) c	10.242(2.513) b	10.679(2.855)
Resentment	9.656(2.903) c	10.241(2.773) c	12.515(3.193) a;b;d	9.793(2.583) c
Suspicion	8.516(2.885) c	8.276(2.136) c	11.576(3.072) a;b;d	8.793(2.908) c
Verbal	10.613(2.642)	11.462(3.023)	11.233(3.070)	10.207(2.484)
Overt Hostility	38.871(8.621) b	44.962(11.470) a	40.607(9.453)	40.429(10.969)
Covert Hostility	26.290(7.721) c	27.607(6.420) c	33.000(7.567) a;b;d	27.448(6.998) c
CDI	5.500(6.715) c	5.741(4.451) c	11.515(9.589) a;b;d	6.875(5.587) c
RCMAS				
Physiological	2.625(2.136) c	2.519(1.718) c	3.893(2.485) a;b;d	2.467(1.814) c
Worry	4.636(3.399) c	3.885(2.372) c	6.000(3.277) a;b;d	4.276(2.926) c
Social	1.469(1.606) c	1.963(1.480) c	3.800(2.235) a;b;d	1.933(1.639) c
Total	8.129(5.789) c	8.423(4.474) c	13.519(7.008) a;b;d	8.655(5.239) c
SOCIAL SUPPORT	40.387(8.902) c	39.654(7.172) c	48.750(10.493) a;b;c	43.385(11.310) c
PIERS-HARRIS				
Behavior	1.677(2.508)	3.269(3.054)	2.273(2.613)	2.290(3.024)
Intelligence	3.548(2.908) c	3.760(1.943) c	6.000(3.615) a;b;d	4.267(2.912) c
Appearance	2.323(2.056) c	1.833(1.239) c;d	5.323(3.544) a;b;d	3.483(3.055) b;c
Anxiety	3.281(3.205) c	2.643(2.345) c	5.719(3.945) a;b;d	3.000(2.503) c
Popularity	1.500(1.164) c	2.040(1.241) c	6.688(3.505) a;b;d	2.613(2.060) c
Happiness	1.000(1.666) c	1.071(1.386) c	1.969(2.389) a;b	1.129(1.765)
Total	19.067(9.490) c	19.174(4.509) c	30.679(14.182) a;b;c	21.222(8.622) c
YOUTH SELF-REPORT				
Depression	-.118(1.145) c	-.279(.643) c	.528(1.077) a;b;d	-.190(.819) c
Aggression	.007(1.080)	.235(1.147)	-.239(.754)	.036(.980)
Delinquency	-.058(1.181)	.146(.907)	-.143(.733)	.081(1.124)
Internalizing	-.159(1.159) c	-.264(.686) c	.538(1.041) a;b;d	-.172(.811) c
Externalizing	-.058(1.132)	.205(1.052)	-.197(.654)	.086(1.096)
TEACHER'S REPORT				
Behavior	2.7000(1.418) b;c	4.538(1.140) a;c;d	3.423(1.629) a;b	3.000(1.697) b
Happy	3.000(1.174) b;c	3.654(1.129) a;c	4.889(1.013) a;b;d	3.308(1.715) c
Academic	2.200(.961) b;c	3.120(.833) a;d	3.385(.898) a;d	2.760(1.052) b;c
Anxious	-.326(.647) c	-.111(.777) c	.673(1.347) a;b;d	-.202(.800) c
Social Withdrawal	-.412(.488) c	-.107(.913) c	.731(1.154) a;b;d	-.153(.972) c
Aggression	-.308(.792) b	1.034(1.147) a;c;d	-.224(.688) b	-.361(.643) b
Inattentiveness	-.529(.592) b;c	.562(1.157) a;d	.402(1.041) a;d	-.382(.667) b;c
Internalizing	-.400(.530) c	-.117(.751) c	.774(1.230) a;b;d	-.200(.949) c
Externalizing	-.380(.764) b	.931(1.040) a;c;d	.028(.904) b	-.428(.667) b

Groups labelled "a" are significantly different from the sociable group at at least the $p < .05$ level of significance.
 Groups labelled "b" are significantly different from the aggressive group at at least the $p < .05$ level of significance.
 Groups labelled "c" are significantly different from the withdrawn group at at least the $p < .05$ level of significance.
 Groups labelled "d" are significantly different from the average group at at least the $p < .05$ level of significance.

reported more physical aggression ($F_{1,106}=8.004$, $p<.006$) and overt hostility ($F_{1,106}=5.035$, $p<.027$). On the adaptive functioning scale of the TRF, teachers reported aggressive children to be behaving less appropriately ($F_{1,100}=17.931$, $p<.000$) and to be less happy ($F_{1,100}=3.83$, $p<.05$) than sociable children. They also reported the current school performance of aggressive children to be poorer than that of sociable children ($F_{1,100}=13.056$, $p<.000$). Aggressive children had higher mean teacher ratings on the aggression, inattentive, and externalizing factors of the TRF when compared with sociable children ($F_{1,115}=37.878$, $p<.000$; $F_{1,117}=22.853$, $p<.000$; $F_{1,115}=34.718$, $p<.000$ respectively).

When compared with children average in their sociability, aggressive children reported more physically aggressive behavior (HIC-R) ($F_{1,106}=3.805$, $p<.05$) and were reported by teachers to be behaving less appropriately ($F_{1,100}=16.833$, $p<.000$); to be more aggressive ($F_{1,115}=40.205$, $p<.000$), more inattentive ($F_{1,117}=16.602$, $p<.000$), and to display more externalizing behavior ($F_{1,115}=37.112$, $p<.000$). In addition when compared with socially average children, the current school performance of aggressive children was lower ($F_{1,100}=3.965$, $p<.05$).

Aggressive children did not differ from sociable and socially average children on the Piers-Harris Children's Self-Concept Scale or on the Social Support Scale.

In contrast to children nominated by their peers as sociable, children nominated as withdrawn manifested more resentment ($F_{1,106}=13.865$, $p<.000$); more suspicion ($F_{1,106}=14.115$, $p<.000$); more covert hostility ($F_{1,106}=11.904$, $p<.001$); more depression ($F_{1,120}=12.114$, $p<.001$ for CDI; $F_{1,116}=7.234$, $p<.008$ for YSR); and more internalizing problems in general on the YSR ($F_{1,116}=8.427$, $p<.004$). Self-reported anxiety and teacher-reported anxiety scores were significantly higher for withdrawn children compared to sociable children ($F_{1,119}=12.886$, $p<.001$ for RCMAS; $F_{1,115}=17.483$, $p<.000$ for TRF). Teachers also reported that, compared with sociable children, withdrawn children behaved less appropriately ($F_{1,100}=4.194$, $p<.04$); were less happy ($F_{1,100}=29.359$, $p<.000$); were achieving less well ($F_{1,100}=20.456$, $p<.000$); were more socially withdrawn ($F_{1,115}=23.731$, $p<.000$), inattentive ($F_{1,117}=16.941$, $p<.000$, and displayed more internalizing problems ($F_{1,115}=25.659$, $p<.000$).

Withdrawn children could also be distinguished from children average in their sociability by higher scores on internalizing behaviors ($F_{1,120}=7.209$, $p<.008$ for CDI; $F_{1,119}=10.151$, $p<.002$ for RCMAS; $F_{1,116}=8.794$, $p<.004$) for depression factor YSR; $F_{1,116}=8.591$, $p<.004$ for internalizing scale YSR; $F_{1,115}=13.217$, $p<.000$ for anxiety factor of TRF; $F_{1,115}=13.688$, $p<.000$) for social withdrawal factor of TRF; $F_{1,117}=11.654$, $p<.001$ for inattentive factor of TRF; $F_{1,115}=16.782$, $p<.000$ for internalizing scale of TRF). Teachers reported withdrawn children were less happy ($F_{1,100}=21.803$, $p<.000$) and

were achieving less well ($F_{1,100}=5.08$, $p<.026$) than socially average children.

In addition to the significant differences between withdrawn children and sociable and socially average children, withdrawn children had significantly higher scores on the Social Support Scale ($F_{1,109}=10.906$, $p<.001$ with sociable; $F_{1,107}=4.114$, $p<.045$ with average) and the Piers-Harris Children's Self-Concept Scale ($F_{1,109}=19.487$, $p<.000$ with sociable; $F_{1,109}=12.266$, $p<.001$ with average).

Withdrawn children did not differ significantly from socially adjusted children (sociable and socially average) on the externalizing measures of mental health while aggressive children did not differ significantly from socially adjusted children on the internalizing measures of mental health. All contrasts between the sociable and socially average groups on the internalizing and externalizing variables were nonsignificant.

Research Question: Given that peer-identified aggressive and withdrawn children exhibit symptoms indicative of concurrent mental health problems, what is the nature of these symptoms and can aggressive and withdrawn children be differentiated on an internalizing-externalizing dimension?

The issue of the nature of the mental health symptoms associated with peer-identified aggressive children in contrast to withdrawn children was investigated in a series of MANOVAs (separate MANOVAs for each measure) using social group as the independent variable and factor scores as dependent variables. The hypothesis that aggressive and withdrawn children could be discriminated on the basis of an internalizing-externalizing dimension was confirmed (See Table 5; Figure 1). Children nominated as aggressive by their peers in comparison to children nominated as withdrawn had significantly higher mean scores on externalizing behaviors - physical aggression subscale of the HIC-R ($F_{1,106}=4.986$, $p<.028$); aggression and externalizing factors of the TRF ($F_{1,115}=32.733$, $p<.000$; $F_{1,115}=16.217$, $p<.000$ respectively). They were also rated by teachers as behaving less appropriately ($F_{1,100}=5.27$, $p<.024$). In contrast, withdrawn children had significantly higher mean scores on internalizing behaviors - resentment, suspicion, and covert hostility subscales of the HIC-R ($F_{1,106}=6.112$, $p<.015$; $F_{1,106}=13.954$, $p<.000$; $F_{1,106}=5.946$, $p<.016$ respectively); depression ($F_{1,120}=10.204$, $p<.002$ for CDI; $F_{1,116}=10.483$, $p<.002$ for depression factor YSR); anxiety ($F_{1,119}=10.556$, $p<.002$ for RCMAS; $F_{1,115}=10.235$, $p<.002$ for anxiety factor TRF); social withdrawal (TRF) ($F_{1,115}=12.111$, $p<.001$); and internalizing problems ($F_{1,116}=10.389$, $p<.002$ for YSR; $F_{1,115}=14.309$, $p<.000$ for TRF). Withdrawn children rated themselves and were rated by teachers as less happy than

Mean Z-scores of 4 Social Groups on Internalizing-Externalizing Mental Health Problems

68

REVISED CHILDREN'S MANIFEST ANXIETY SCALE

YOUTH SELF-REPORT INVENTORY

CHILDREN'S DEPRESSION INVENTORY

TEACHERS' REPORT FORM

PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE

SOCIAL SUPPORT SCALE

HOSTILITY INVENTORY FOR CHILDREN-R

aggressive children ($F_{1,109}=4.951$, $p<.028$ for happiness subscale of Piers-Harris Children's Self-Concept Scale; $F_{1,100}=9.272$, $p<.003$ for adaptive functioning scale of TRF). In addition, compared with aggressive children, withdrawn children reported lower self-esteem ($F_{1,109}=16.678$, $p<.000$) and weaker social support ($F_{1,107}=11.823$, $p<.001$).

The distinction between peer-identified aggressive and withdrawn children was further examined in a discriminant function analysis using summary scores for the various measures as the set of dependent variables. Structure coefficients were used to determine the relative importance of the discriminating variables. Results of the discriminant function analysis supported the differentiation of aggressive and withdrawn children on the basis of an internalizing-externalizing dimension. Self-reported internalizing behavior was the most powerful variable in discriminating between aggressive and withdrawn children ($r=.61$ with canonical discriminant function). High scores were related to being classified as withdrawn while low scores were related to classification as aggressive. Other variables on which high scores were associated with being classified as withdrawn included self-reported anxiety ($r=.53$); covert hostility ($r=.45$); teacher ratings of internalizing behavior ($r=.38$); and depression ($r=.36$). Variables on which high scores were associated with classification as aggressive included teacher ratings of externalizing behavior ($r=-.45$); overt hostility

($r=-.14$); and self-reported externalizing behavior ($r=-.13$). On the basis of discriminant function scores 87.18% of withdrawn and aggressive children were assigned to their respective groups. Two aggressive children (10%) were incorrectly assigned to the withdrawn group, while three withdrawn children (15.8%) were incorrectly assigned to the aggressive group. (See Table 6).

Research Question: What is the role of self-esteem and social support in the relationship between peer-identified aggression and withdrawal and mental health problems?

Median splits were used to create groups high and low in self-esteem and in social support. Only 27% (9) of the withdrawn children were in the high self-esteem subgroup compared to 68% (19) of the aggressive children; 64% (21) of the sociable children and 43% (13) socially average children. These proportions were reversed in the low self-esteem subgroup, where 73% (24) were withdrawn, 32% (9) were aggressive, 36% (12) were sociable, and 57% (17) were average in their sociability. The unequal distribution across the four social groups of children in high versus low self-esteem groups was statistically significant ($X^2=13.377$, $p<.004$) (Appendix Q). Similarly there was an unequal distribution across the social groups of children in the weak versus strong social support subgroups $X^2=16.438$,

Table 6

DISCRIMINANT FUNCTION ANALYSIS
AGGRESSIVE (n=20) AND WITHDRAWN (n=19) GROUPS

Standardized Canonical Discriminant Function Coefficients

	Function 1
Overt Hostility	-.45630
Covert Hostility	.33041
CDI	-.33701
RCMAS	.20682
YSR-Internalizing	.80685
YSR-Externalizing	-.23666
TRF-Internalizing	.20915
TRF-Externalizing	-.43138

Structure Matrix

(Pooled-within-groups correlation between discriminating variables and canonical discriminant functions)

YSR-Internalizing	.61290
RCMAS	.53439
TRF-Externalizing	-.45385
Covert Hostility	.44692
TRF-Internalizing	.38423
CDI	.36112
Overt Hostility	-.13678
YSR-Externalizing	-.12862

**Canonical Discriminant Functions evaluated at Group Means
(Group Centroids)**

Aggressive	-.92325
Withdrawn	.97184

Classification Results

Actual Group	No. of cases	Predicted Group Membership	
		Aggressive	Withdrawn
Aggressive	20	18 (90%)	2 (10%)
Withdrawn	19	3 (15.8%)	16 (84.2%)

Percent of "grouped" cases correctly classified: 87.18%

$p < .001$) (Appendix R). Twenty-four percent (8) withdrawn children were in the strong social group support group in comparison to 72% (21) aggressive children; 62% (21) sociable children, and 48% (15) socially average children. In the weak social support group 76% (25) were withdrawn, 28% (8) were aggressive, 38% (13) were sociable, and 52% (16) were socially average. Fifteen percent (5) children in the sociable group, 13% (4) in the aggressive group, 24% (8) in the withdrawn group, and 31% (10) in the average group had both low self-esteem and weak social support.

Results of factorial MANOVAs (4 social groups X 2 self-esteem groups and 4 social groups X 2 social support groups) revealed significant main effects for social groups and self-esteem and for social groups and social support. All interactions between social groups and self-esteem groups and between social groups and social support groups were nonsignificant (See Appendices S and T). The nonsignificant interactions indicate that self-esteem and social support had the same effect for all four social groups ie. lower self-esteem and/or social support scores were associated with higher scores on the mental health measures. Given the main effect of both self-esteem and social support, MANOVAs were conducted for internalizing and externalizing variables on self-esteem and social support subgroups of withdrawn and aggressive children. (See Tables 7 and 8). Aggressive children with low self-esteem ($n=9$) reported significantly more physical aggression

TABLE 7. UNIVARIATE RESULTS FOR SUBGROUPS OF AGGRESSIVE CHILDREN

3 VARIABLE			HI Self-Esteem (n=19)	Low Esteem (n=9)	F value	Prob.	HI Support (n=21)	Low Support (n=8)	F value	Prob.
Hostility Inventory										
Assault	11.474 (4.101)	15.000(4.272)	4.4	0.046	11.550(4.199)	15.250(3.991)	4.556	0.042		
Indirect	8.737(2.400)	10.778(2.489)	4.316	0.048	9.200(2.764)	9.875(2.100)	0.384	n.s.		
Irritability	8.579(2.652)	10.222(2.279)	2.549	n.s.	8.750(2.447)	10.000(2.976)	1.321	n.s.		
Negativism	10.632(3.113)	13.444(1.590)	6.455	0.017	10.650(2.207)	13.750(3.694)	7.593	0.011		
Resentment	9.947(2.758)	10.889(3.018)	0.671	n.s.	9.700(2.716)	11.625(2.774)	2.837	n.s.		
Suspicion	8.158(2.410)	8.556(1.667)	0.198	n.s.	8.250(2.291)	8.375(1.996)	0.018	n.s.		
Verbal	10.211(3.409)	12.667(3.317)	3.224	n.s.	10.350(3.407)	12.625(3.462)	2.526	n.s.		
OVERT	41.053(10.942)	51.889(8.753)	6.736	0.015	41.75(10.447)	51.5(11.136)	4.801	0.038		
COVERT	26.684(6.75)	29.667(5.454)	1.335	n.s.	26.7(6.292)	30(6.525)	1.541	n.s.		
CDI	4.895(4.898)	7.625(2.560)	2.196	n.s.	4.4(4.057)	8.75(3.808)	6.786	0.015		
RCMAS	7.763(3.607)	9.844(5.474)	1.491	n.s.	7.267(3.864)	11.5(3.742)	6.96	0.014		
YOUTH SELF-REPORT										
Depression	-.443(.644)	.052(.565)	3.506	n.s.	-.515(.581)	.284(.395)	12.535	0.002		
Aggression	-.085(.990)	.743(1.241)	3.327	n.s.	.193(1.175)	.334(1.148)	0.083	n.s.		
Delinquency	-.151(.865)	.784(.736)	7.04	0.014	-.006(.884)	.506(.916)	1.846	n.s.		
INTERNALIZING	-.451(.700)	.085(.529)	3.712	n.s.	-.429(.692)	.129(.517)	4.171	0.052		
EXTERNALIZING	-.102(.997)	.781(.976)	4.399	0.05	.114(1.070)	.422(1.045)	0.473	n.s.		
TEACHER'S REPORT FORM										
Behavior	4.353(1.272)	5.00(.894)	0.538	n.s.	4.294(1.160)	5.143(1.069)	3.69	n.s.		
Happiness	3.647(.996)	3.333(1.366)	0.097	n.s.	3.294(1.047)	4.143(.900)	3.029	n.s.		
Academic	3.059(.827)	3.600(.548)	1.864	n.s.	3.125(.885)	3.143(.690)	0.002	n.s.		
Anxiety	-.150(.663)	-.214(.762)	0.047	n.s.	-.267(.682)	-.004(.661)	0.852	n.s.		
Withdrawal	-.221(.824)	.181(1.173)	1.015	n.s.	-.380(.751)	.463(1.113)	5.323	0.03		
Aggression	1.060(1.131)	.688(.871)	0.678	n.s.	.617(.842)	1.637(1.178)	6.516	0.017		
Inattention/ness	.468(1.127)	.960(1.306)	0.882	n.s.	.241(1.126)	1.253(1.042)	4.667	0.041		
INTERNALIZING	-.187(.710)	-.047(.807)	0.199	n.s.	-.333(.731)	.209(.603)	3.398	n.s.		
EXTERNALIZING	.926(.968)	.734(.980)	0.218	n.s.	.529(.79)	1.546(.98)	8.112	0.009		

TABLE 8. UNIVARIATE RESULTS FOR SUBGROUPS OF WITHDRAWN CHILDREN

4 VARIABLE	HI Esteem (n=9)	Lo Esteem (n=24)	F value	Prob.	HI Support (n=8)	Low Support (n=25)	F value	Prob.
Hostility Inventory								
Assault	9.556(3.812)	10.296(2.837)	0.369	n.s.	8.750(2.252)	10.254(3.230)	2.068	n.s.
Indirect	8.667(2.121)	9.208(1.935)	0.487	n.s.	7.413(1.460)	9.588(1.831)	9.323	0.005
Irritability	9.111(2.759)	8.958(2.510)	0.023	n.s.	7.500(1.512)	9.480(2.632)	4.042	0.053
Negativism	9.667(3.606)	10.458(2.021)	0.642	n.s.	8.125(1.458)	10.920(2.414)	9.487	0.004
Resentment	11.889(2.619)	12.750(3.404)	0.468	n.s.	10.750(3.151)	13.080(3.054)	3.477	n.s.
Suspicion	10.556(2.455)	11.958(3.237)	1.381	n.s.	9.625(2.066)	12.200(3.109)	4.757	0.037
Verbal	10.556(2.455)	11.413(2.932)	0.548	n.s.	9.000(1.852)	11.876(2.906)	6.857	0.014
OVERT	38.444(11.159)	41.375(7.825)	0.725	n.s.	33.788(4.113)	42.908(8.616)	9.152	0.005
COVERT	31.556(5.769)	33.667(7.987)	0.522	n.s.	27.875(5.055)	34.760(7.350)	6.036	0.02
CDI	5.111(4.676)	13.917(9.912)	6.462	0.016	5.125(3.482)	13.56(10.054)	5.323	0.038
RCMAS	8.456(4.729)	15.446(5.842)	10.285	0.003	9.613(5.605)	14.796(6.127)	4.503	0.042
YOUTH SELF-REPORT								
Depression	.052(.565)	.671(1.108)	1.454	n.s.	-.360(.746)	.824(1.014)	9.164	0.005
Aggression	.743(1.241)	-.242(.756)	0.001	n.s.	-.879(.354)	-.026(.734)	9.857	0.004
Delinquency	.784(.736)	.043(.734)	3.911	n.s.	-.700(.361)	.010(.791)	7.47	0.01
INTERNALIZING	.141(.901)	.693(1.069)	1.87	n.s.	-.268(.626)	.807(1.020)	7.79	0.009
EXTERNALIZING					-0.809(.383)	.007(.599)	12.934	0.001
TEACHER'S REPORT FORM								
Behavior	3.500(1.761)	3.316(1.635)	0.005	n.s.	2.400(1.342)	3.600(1.635)	3.059	n.s.
Happiness	4.500(1.049)	5.050(.999)	1.053	n.s.	4.800(.447)	4.952(1.117)	0.032	n.s.
Academic	2.833(.983)	3.526(.841)	2.538	n.s.	2.800(1.095)	3.500(.827)	2.254	n.s.
Anxiety	-.214(.762)	.851(1.281)	1.148	n.s.	.554(2.016)	.758(1.146)	0.109	n.s.
Withdrawal	.181(1.173)	1.039(1.102)	6.056	0.021	.123(.930)	.972(1.130)	2.853	n.s.
Aggression	.688(.871)	-.269(.664)	0.092	n.s.	-.243(.461)	-.250(.756)	0	n.s.
Inattention/veness	-.139(.842)	.558(.953)	2.957	n.s.	-.204(.695)	.579(.570)	3.85	n.s.
INTERNALIZING	-.011(1.080)	1.047(1.145)	4.148	0.052	.368(1.574)	.948(1.087)	1.128	n.s.
EXTERNALIZING	-.197(.973)	.043(.896)	0.331	n.s.	-.533(.527)	-.210(.828)	0.676	n.s.

($F_{1,26}=4.4$, $p<.05$); negativism ($F_{1,26}=6.455$, $p<.017$); indirect aggression ($F_{1,26}=4.316$, $p<.05$); overt hostility ($F_{1,26}=6.736$, $p<.015$); delinquency ($F_{1,24}=7.04$, $p<.014$) and more externalizing problems on the YSR ($F_{1,24}=4.399$, $p<.05$) than aggressive children with high self-esteem ($n=19$). Aggressive children with weak social support ($n=8$), compared with aggressive children with strong social support ($n=21$), had significantly higher mean scores on the physical aggression, negativism, and overt hostility scales of the HIC-R ($F_{1,26}=4.556$, $p<.042$; $F_{1,26}=7.593$; $F_{1,26}=4.801$, $p<.038$ respectively); on depression as assessed by both the CDI and YSR ($F_{1,25}=6.786$, $p<.015$; $F_{1,24}=12.535$, $p<.002$ respectively); self-reported anxiety ($F_{1,25}=6.96$, $p<.014$) and internalizing behavior ($F_{1,25}=4.171$, $p<.05$); teacher rated social withdrawal ($F_{1,24}=5.323$, $p<.03$), aggression ($F_{1,24}=6.516$, $p<.017$), and externalizing behavior ($F_{1,24}=8.112$, $p<.009$).

Withdrawn children with low self-esteem ($n=24$) reported greater symptoms of anxiety ($F_{1,31}=10.285$, $p<.003$) and depression ($F_{1,31}=6.462$, $p<.016$) than withdrawn children with high self-esteem ($n=9$). Teachers of withdrawn children with low self-esteem reported them to be more socially withdrawn ($F_{1,27}=6.056$, $p<.02$) and to exhibit more internalizing behavior ($F_{1,27}=4.148$, $p<.05$) than withdrawn children with high self-esteem.

Compared with withdrawn children with strong social support ($n=8$), withdrawn children with weak social support

($n=25$) reported both more internalizing and externalizing behaviors. With respect to externalizing behaviors, withdrawn children with weak social support were more negative ($F_{1,31}=9.487$, $p<.004$), verbally aggressive ($F_{1,31}=6.857$, $p<.014$), indirectly aggressive ($F_{1,31}=9.323$, $p<.005$), overtly hostile ($F_{1,31}=9.152$, $p<.005$), and reported more aggressive behavior on the aggression and externalizing subscales of the YSR ($F_{1,30}=9.857$, $p<.004$; $F_{1,30}=12.934$, $p<.001$, respectively) than withdrawn children with strong social support. In terms of internalizing behaviors, withdrawn children with weak social support, in comparison to withdrawn children with strong social support, reported more depression ($F_{1,30}=9.164$, $p<.005$ for the YSR; $F_{1,31}=5.323$, $p<.028$ for the CDI); irritability ($F_{1,31}=4.042$, $p<.05$); suspicion ($F_{1,31}=4.757$, $p<.037$), covert hostility ($F_{1,31}=6.036$, $p<.02$); and internalizing problems (YSR) ($F_{1,30}=7.79$, $p<.009$).

Differences between peer-identified aggressive self-esteem subgroups and peer-identified withdrawn social support subgroups on teacher rated behavior problems were non-significant.

In summary the major findings of the present research include the following:

1. Peer-identified aggressive and withdrawn children manifested a greater number of symptoms indicative of

mental health problems than sociable or socially average children.

2. The mental health problems of peer-identified withdrawn and aggressive children could be differentiated on the basis of an internalizing-externalizing dimension of behavior. Withdrawn children had higher mean scores on internalizing behaviors - anxiety (RCMAS; TRF); depression (CDI; YSR); social withdrawal (TRF); resentment and suspicion (HIC-R). Aggressive children had higher mean scores on externalizing behaviors - physical aggression and negativism (HIC-R); teacher ratings of behavior and aggression (TRF).
3. Low self-esteem and weak social support placed peer-identified withdrawn and aggressive children at greater risk for mental health problems of both an internalizing and externalizing nature.

DISCUSSION

The results of the present study support the growing consensus in the literature that low accepted children are at risk for concurrent and later difficulties (for a review see Parker and Asher, 1987). Compared to sociable or socially average children, children nominated by their peers as aggressive displayed a greater frequency and/or severity of externalizing problems (overt hostility, aggression,

inattentiveness, and other inappropriate behaviors). In contrast children nominated by their peers as withdrawn exhibited a greater frequency and/or severity of internalizing problems (covert hostility, anxiety, depression, shyness, worrying).

The demonstration that aggression and withdrawal are associated with different outcomes is a major development in the study of children with poor peer relations. The predominantly externalizing outcomes of previous research have established a robust association between aggression and disturbed outcome but have failed to provide any conclusive evidence of an association between social withdrawal and disturbed outcome. Evidence from the present study and soon to be published data from the Waterloo Longitudinal Project (Hymel, Rubin, Rowden, and LeMare, 1990) has documented that withdrawal is a risk factor both concurrently and predictively for internalizing problems. In the Waterloo Longitudinal Project poor peer acceptance, social isolation and perceived social competence in grade 2 were related predictively to internalizing problems (loneliness, low self-esteem, low perceived social competence, and teacher ratings of shy-anxious behavior) in grade 5.

In addition to the predominance of externalizing outcome measures in the literature, developmental differences in the way social withdrawal is perceived may be another factor which has contributed to the failure to find support for the risk

status of withdrawn children. Social withdrawal may be viewed as normal at early stages of development and since most of the previous research on withdrawn children has been conducted with young children it is not surprising that researchers have found that withdrawal is not associated with increased risk for maladjustment. It may not be until puberty when pressure from the peer group to conform to normative standards of social behavior causes withdrawal to be labeled as deviant behavior. The importance of peer acceptance in adolescence is highlighted in recent research by Berndt (1990) which found that peer acceptance was a significant predictor of general self-worth at grade 8 but only marginally significant at grade 5 and not at all significant at grade 11. The social ostracism which results from being labeled as deviant, coupled with the physiological changes that are taking place at adolescence, may make some withdrawn children vulnerable to internalizing disorders, such as depression. Support for this interpretation comes from a contrast between the findings of a pilot study conducted with grade 5 students (Vargo, 1988) and the present study conducted with grade 7 students. In the grade 5 sample, the scores of withdrawn children on indices of adjustment (Hostility Inventory for Children; Children's Concerns Inventory) were not significantly different from those of sociable children, implying that withdrawn children were not at any greater risk for adjustment problems than sociable children. However, in the grade 7 sample, scores of withdrawn children on internalizing indices of mental health were

significantly different from both sociable and socially average children, as were scores on measures of self-esteem, social support and teacher ratings of happiness. The merit of the hypothesis that social withdrawal reflects deviance in adolescence but not in early childhood could be examined in longitudinal or cross-sectional research comparing the sociometric status of withdrawn children at different points in the life-span. If the correlation between withdrawal and low social acceptance were to increase with age then evidence would be provided in support of the hypothesis that the risk status of withdrawn children is a function of age.

A third possible explanation for the failure of the majority of studies to find support for the risk status of withdrawn children is that there may be a developmental shift in the behaviors associated with low peer acceptance. Overt aggression may be the predominant response in younger children to anger and frustration, while older children may internalize anger, expressing it covertly as anxiety and/or depression. This line of reasoning would explain why, in the grade 5 sample, aggressive and withdrawn children could not be differentiated on an internalizing-externalizing dimension, whereas by grade 7 such a differentiation was possible. This hypothesized shift in symptomatology for some children, from externalizing to internalizing behaviors, has implications for the developmental course of psychopathology and is worthy of future research. Longitudinal or cross-sectional research

should be designed to examine the mental health problems associated with poor peer relations at different stages of development.

While it was not a primary focus of the research, data collected incidentally in the course of the study relating to academic performance indicated that, in addition to externalizing and internalizing problems, both aggressive and withdrawn groups of children were achieving less well in school compared to sociable and children average in sociability. This was evident in both self-report data (ratings on the intellectual and school status factor of the Piers-Harris Children's Self-Concept Scale) and teacher ratings of current academic performance (TRF). Another indication that social problems were related to academic problems comes from the finding of significantly higher mean scores for the aggressive and withdrawn groups on the inattentiveness factor of the Teacher Report Form. This factor contained several items relating to school performance - "fails to finish schoolwork"; "difficulty learning"; "poor school work"; "underachieving".

For those children whose teachers completed the academic history portion of the TRF, there was a trend for aggressive and withdrawn children to be recommended more frequently for placement in special education classes. This was in contrast to sociable children who were recommended more frequently for placement in gifted classes. There were no noticeable differences between the four social groups in grade retention.

A major contribution of the present study has been to demonstrate the powerful role played by self-esteem and social support in the relationship between peer-identified aggression and withdrawal and concurrent internalizing and externalizing mental health symptoms. For all social groups, low self-esteem and/or weak social support was related to a greater number of both internalizing and externalizing behaviors but this effect was most pronounced in the low accepted children. Not only was the externalizing behavior of aggressive children exacerbated by the presence of low self-esteem and/or weak social support, but internalizing behaviors increased as well. Similarly, withdrawn children with low self-esteem and/or weak social support displayed, in addition to higher scores on the internalizing measures, significantly higher scores on several of the externalizing measures. Low self-esteem and weak social support therefore appear to be associated not only with an increase in the frequency and severity of mental health problems but also with an overlapping of symptomatology.

The absence of a causal model to explain the moderating influence of self-esteem and social support is a limitation of the present research. In the case of self-esteem it can be speculated that low accepted children who internalize the reason for their unpopularity will experience lower self-esteem than children who externalize the source of their unpopularity. For example children who believe their intellectual superiority

alienates them from their peers possibly wouldn't suffer the same damage to their self-esteem as children who believe that their personal inadequacies are responsible for their low acceptance. The viability of this hypothesis could be investigated by the inclusion of a measure of locus of control.

A study by Parker and Asher (1990) provides some insight into the mechanism by which social support operates to moderate risk status in aggressive and withdrawn children. In research on the prevalence of best friendship in a sample of 1059 third- through sixth-grade children the researchers found that, while friendship was not as prevalent among low accepted children, those low accepted children who indicated a reciprocal best friendship reported less loneliness than low accepted children who reported no best friendship. The moderating influence of reciprocal friendships for other outcomes should be investigated in populations of low accepted children.

Given the robust association in the literature between aggression and disturbed outcome, an unexpected finding was the apparent good health of children nominated by their peers as aggressive. In contrast to withdrawn children their scores on the self-esteem and social support measures were not significantly different from children nominated as sociable or socially average. Similarly Hymel (1990) reported that peer identified aggressive children viewed themselves as more socially competent in their peer relations than withdrawn

children. These findings may be interpreted to reflect a self-serving bias in reporting or a lack of interspection on the part of aggressive children. Patterson, Kupersmidt, and Griesler (1990) reported that aggressive-rejected and nonaggressive-rejected differed in the accuracy of their self-reports, although differences for self-concept were nonsignificant. Compared with peer evaluations, aggressive-rejected children tended to overestimate their behavioral competence while nonaggressive-rejected children tended to provide accurate self-evaluations of their behavior.

The concurrent nature of the study limits the predictions that can be made with regard to the prognosis for childhood aggression and withdrawal. However, based on the assumption that present behavior is the best predictor of subsequent behavior, there is some indication that a number of children identified by their peers as aggressive or withdrawn may be "at risk" for various emotional, behavioral, and academic problems. The symptom profile of withdrawn children is particularly indicative of maladjustment. Thirty percent of withdrawn children scored within the clinical range for internalizing problems on the Teacher's Report Form (T-score=70 ie. two standard deviations above the mean). In addition to internalizing problems, they had lower self-esteem, weaker social support, and were rated by teachers as less happy than any of the other social groups. The combination of low self-esteem and weak social support was

associated with clinical levels of psychopathology in the present study. Six withdrawn children with both low self-esteem and social support scored within the pathological range for depression (CDI cut-off score of 19¹), while eight withdrawn children with low self-esteem and social support scored within the pathological range for anxiety (RCMAS cut-off score of 20²). The difference in the number of withdrawn children scoring within the pathological range compared to the other three social groups was statistically significant ($X^2=9.22$, $p<.026$ for depression; $X^2=19.89$, $p<.000$ for anxiety). (See Tables 9 and 10).

Findings from the present study have important implications for both applied and research settings. In applied settings educators and practitioners must be made aware of externalizing and internalizing problems associated with low peer acceptance. It is anticipated that sensitivity to the problems of unpopular children will result in higher referral rates for assessment and intervention by trained personnel, especially in the case of withdrawn children. There is currently a hesitancy on the part of teachers to refer withdrawn children because they frequently do not present any discipline problems in the classroom.

Not only do educators need to identify withdrawn children but educational systems must provide the resources for

1 Canadian normative data, Friedman et al. 1977/1978

2 Normative data, Reynolds and Richmond, 1987

Table 9

**CHILDREN SCORING WITHIN THE PATHOLOGICAL RANGE ON THE
CHILDREN'S DEPRESSION INVENTORY**
(cut-off score of 19)

<u>Social Group</u>	<u>Below Cut-off</u>	<u>Above Cut-off</u>	<u>Total</u>
Sociable	30	2	32
Aggressive	27	0	27
Withdrawn	27	6	33
Average	31	1	32

<u>Chi-Square</u>	<u>Degrees of Freedom</u>	<u>Significance</u>
9.222	3	.026

Table 10

**CHILDREN SCORING WITHIN THE PATHOLOGICAL RANGE ON THE
REVISED CHILDREN'S MANIFEST ANXIETY SCALE**
(cut-off score of 20)

<u>Social Group</u>	<u>Below Cut-off</u>	<u>Above Cut-off</u>	<u>Total</u>
Sociable	33	0	33
Aggressive	27	0	27
Withdrawn	22	8	30
Average	29	1	30

<u>Chi-Square</u>	<u>Degrees of Freedom</u>	<u>Significance</u>
19.89	3	.000

intervention for these children. Findings from the Ontario Child Health Study (Offord, 1986) indicated that "school services are geared more to helping those with physical or developmental disabilities than in providing for the needs of children with emotional problems". The documented association between poor peer relations, mental health problems and educational problems stresses the need for schools to broaden their focus to include the social and emotional needs of the child, in addition to the academic needs.

In research settings, findings from the present study have implications for the choice of outcome measures to assess the consequences of socially deviant behavior. It has been demonstrated that aggressive and withdrawn children differ in the nature of the concurrent adjustment problems they manifest. Therefore, researchers must tailor the outcome measure used to the type of socially deviant behavior displayed - externalizing measures for aggressive children in contrast to internalizing measures for withdrawn children. Age may also be an important factor to consider when studying the risk status of withdrawn children. In addition, researchers wishing to assess the prognostic implications of both social withdrawal and socially aggressive behavior must take into account the role played by self-esteem and social support. The inclusion of these two variables may be important discriminators between socially deviant children who are "at risk" for disordered outcome and those who are not.

In conclusion, the present study has indicated that children identified by their peers as either aggressive or withdrawn experience concurrent mental health problems. Aggressive children manifest externalizing problems, whereas withdrawn children display behavior symptomatic of internalizing problems. Both groups are performing less well academically than more sociable children. When combined with low self-esteem and/or weak social support, the risk for the development of mental health problems in socially aggressive and withdrawn children is increased. In applied settings there is a need to identify and provide intervention for both aggressive and withdrawn children through increasing the awareness of educators and practitioners to the prognostic implications of aggression and withdrawal for subsequent disorder. In research on the long term consequences of poor peer relations in childhood, outcome indices must be consistent with the nature of the socially deviant behavior.

Findings from the present research have contributed to the literature by differentiating between the nature of the symptomatology associated with peer-identified aggression and withdrawal and by demonstrating the importance of social support and self-esteem in the relationship between childhood social problems and mental health indices of concurrent maladjustment. Future research should be directed towards examining the implications of the present findings for developmental differences in the risk status of children with

poor peer relations and to the development of a model to explain the causal pathways between the various risk indicators.

REFERENCES

- Achenbach, T. M. & Edelbrock, C. (1987). Manual for the Youth Self-Report and Profile. Burlington, VT: University of Vermont Department of Psychiatry.
- Achenbach, T. M. & Edelbrock, C. (1986). Manual for the Teacher Report Form and Teacher Version of the Child Behavior Profile. Burlington, VT: University of Vermont Department of Psychiatry.
- American Psychiatric Association (1980). Diagnostic and Statistical Manual of Mental Disorders.
- Andrews, G., Tennant, C., Hewson, D., Schonnel, M. (1978). The relation of social factors to physical and psychiatric illness. American Journal of Epidemiology, 108, 27-35.
- Anisman, H. and Zacharko, R. M. (1982). Depression: The predisposing influence of stress. The Behavioral and Brain Sciences, 5, 89-99.
- Asarnow, J. R. (1988). Peer status and social competence in child psychiatric inpatients: A comparison of children with depressive, externalizing, and concurrent depressive and externalizing disorders. Journal of Abnormal Child Psychology, 16, 2, 151-162.
- Berndt, T. J. (1990). Relations of friendships and peer acceptance to adolescents' self-evaluations. Paper presented at annual meeting of the American Educational Research Association, Boston, Mass..
- Birren, J. E. (1944). Psychological examinations of children who later became psychotic. Journal of Abnormal Social Psychology, 39, 84-95.
- Bower, E. M. (1960). Early identification of emotionally handicapped children in school. Springfield, Ill. : Charles C. Thomas.
- Bower, E. M., Shelhammer, T.A. & Daily, J. M. (1968). Social characteristics of male adolescents who later became schizophrenics. American Journal of Orthopsychiatry, 30, 712-729.

- Buhrmester, D. (1982). Children's Concerns Inventory Manual. Department of Psychology, University of Denver, 2040 South York, Colorado 80208.
- Buss, L.A. H. & Durkee, L.A. (1957). An inventory for assessing different kinds of hostility. Journal of Consulting Psychology, 21, 343-349.
- Cantwell, D. P. and Carlson, G. A. (1983). Affective disorders in childhood and adolescence. New York: Spectrum.
- Coddington, R. D. (1972). The significance of life events as etiologic factors in the diseases of children. Journal of Psychosomatic Research, 16, 7-18.
- Cohen, S. and Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. Psychological Bulletin, 98, 2, 310-357.
- Coie, J. (1985). Fitting social skills intervention to the target group. In B. H. Schneider, K. H. Rubin & J. E. Ledingham (Eds.), Peer relationships and social skills in childhood: Issues in assessment and training. New York: Springer-Verlag.
- Coopersmith, S. (1967). The antecedents of self-esteem. San Francisco: W. H. Freeman & Co.
- Cowen, E. L., Pederson, A., Babigian, H., Izzo, L.D. and Trost, M.A. (1973). Long-term follow-up of early detected vulnerable children. Journal of Consulting and Clinical Psychology, 438 -446.
- Ensminger, M. C., Kellam, S. G. and Rubin, B. R. (1983). School and family origins of delinquency: Comparisons by sex. In K. T. Van Drusen and S. A. Mednick (Eds.), Prospective studies of crime and delinquency (pp 73-97). Hingham, MA: Kluwer-Nijhoff Publishing.
- Farrington, D. P. (1978). The family backgrounds of aggressive youths. In L. A. Hersov, M. Berger & D. Shaffer (Eds.), Aggression and anti-social behavior in childhood and adolescence. Oxford: Pergamon Press.

- Feldhusen, J. F. Thurston, J. R. & Benning, J. J. (1973). Aggressive classroom behavior and school achievement. Journal of Special Education, 4, 431-439.
- Feldhusen, J. F., Thurston, J. R. & Benning, J. J. (1973). A longitudinal study of delinquency and other aspects of children's behavior.; International Journal of Criminology and Penology, 1, 341-351.
- Flemming, D. & Ricks, D. F. (1970). Emotions of children before schizophrenia and before character disorder. In M. Roff & D. F. Ricks (Eds.), Life history research in psychopathology (Vol. 1). Minneapolis: University of Minnesota Press.
- Frazee H. E. (1953). Children who later became schizophrenic. Smith College Studies in Social Work, 23, 125-149.
- Friedman, R. J., Miezeitis, S., and Butler, L. F. (1977). Development and evaluation of school based assessment and treatment approaches. Phase I. Toronto: Ontario Institute for Studies in Education.
- Gorlow, Guthrie, & Butler (1963). Referenced in E. V. Piers. Manual for the Piers-Harris Self-Concept Scale.
- Harter, S. (1988). Causes, correlates and the functional role of global self-worth: A life-span perspective. In J. Kalligian and R. Sternberg (Eds.) Perceptions of competence and incompetence across the life-span. New Haven, Ct.: Yale University Press.
- Havinghurst, R. J., Bowman, P. H. , Liddle, C. P., Matthews, C. V. & Pierce, J. V. (1962). Growing up in River City. New York: Wiley.
- Hayvren, M. & Hymel, S. (1984). Ethical issues in sociometric testing: The impact of sociometric measures in interactive behavior. Developmental Psychology, 20, 844-849.
- Heitzmann, C. A. & Kaplan, R. M. (1988). Assessment of methods for measuring social support. Health Psychology, 7(1), 75-109.
- Hershberg, S. C., Carlson, G. A., Cantwell, D. P. and Strober, M. (1982). Anxiety and depressive disorders in psychiatrically disturbed children. Journal of Clinical Psychiatry, 43.9, 358-361.

- Hymel, S. (1990). Academic versus social competence: Considering the child's perspective. Paper presented at annual meeting of the American Educational Research Association, Boston, Mass..
- Hymel, S., Rubin, K., Rowden, L., & LeMare, L. (1990). Children's peer relationships: Longitudinal prediction of internalizing and externalizing problems from middle to late childhood. Child Development (in press).
- Janes, C. L., Hesselbrock, V. M., Myers, D.G. & Penniman, J. H. (1979). Problem boys in young adulthood: Teacher's ratings and twelve-year follow-up. Journal of Youth and Adolescence, 8, 453-472.
- Kane, J. S. and Lawler II, E. D. (1978). Methods of peer assessment. Psychological Bulletin, 85, 555-586.
- Kazdin, A.E., Esveldt-Dawson, K., Unis, A.S. and Rancurello, M.D. (1983). Child and parent evaluations of depression and aggression in psychiatric inpatient children. Journal of Abnormal Child Psychology, 11:3, 401-413.
- Kovacs, M. (1983). The Children's Depression Inventory. Unpublished manuscript, University of Pittsburgh School of Medicine.
- Kuhlen, R. & Collister, E. G. (1952). Sociometric status of sixth- and ninth- graders who fail to finish high school. Educational and Psychological Measurement, 12, 632-637.
- Kupersmidt, J. B. (1983). Predicting delinquency and academic problems from childhood peer status. Symposium presented at the biennial meeting of the Society for Research in Child Development, Detroit, Ill.
- Ledingham, J. E. and Younger, A. J. (1985). The influence of the evaluator on assessments of children's social skills. In B. H. Schneider, K. H. Rubin & J. E. Ledingham (Eds.), Peer relationships and social skills in childhood: Issues in assessment and training. New York: Springer-Verlag.
- Ledingham, J. E. & Schwartzman, A. E. (1984). A 3-year follow-up of aggressive and withdrawn behavior in childhood: Preliminary findings. Journal of Abnormal Child Psychology, 12, 157-168.

- Ledingham, J. E., Younger, A., Schwartzman, A. & Bergeron, G. (1982). Agreement among teacher, peer, and self-ratings of children's aggression, withdrawal, and likability. Journal of Abnormal Child Psychology, 10, 3, 363-372.
- Masten, A. S., Morison, P. and Pellegrini, D.S. (1985). A revised class play method of peer assessment. Developmental Psychology, 21:3, 523-533.
- Mead, G. H. (1934). Mind, self and society. Chicago, Ill.: University of Chicago Press.
- Mietzis, S., Friedman, R. J., Butler, L., & Blanchard, J. P. (1978). Development and evaluation of school based assessment and treatment approaches for depressed children. Phase II. Toronto: Ontario Institute for Studies in Education
- Michael, C. M., Morris, D. P. & Soroker, E. (1957). Follow-up studies of shy, withdrawn children II: Relative incidence of schizophrenia. American Journal of Orthopsychiatry, 27, 331-337.
- Millen (1966). Referenced in E. V. Harris. Manual for the Piers-Harris Self-Concept Scale.
- Morris, D. P., Soroker, E. & Burruss, G. (1954). Follow-up studies of shy, withdrawn children I: Evaluation of later adjustment. American Journal of Orthopsychiatry, 24, 743-754.
- Norusis, Maria J. (1988). SPSS/PC+ V2.0. SPSS, Inc.
- Oden, S. & Asher, S. R. (1977). Coaching children in social skills for friendship making. Child Development, 48, 495-506.
- Offord, D. (1986). Ontario Child Health Study: Summary of initial findings. Queen's Printer for Ontario.
- O'Neal, P. & Robins, L. N. (1958). The relations of childhood behavior problems to adult psychiatric status: A 30 year follow-up study of 15 subjects. American Journal of Psychiatry, 114, 961-969.

- Parker, J. G. & Asher, S. R. (1987). Peer acceptance and later personal adjustment: Are low-accepted children "at risk". Psychological Bulletin, 102, 357-389.
- Parker, J. G. and Asher, S. R. (1990). Friendship adjustment, group acceptance, and feelings of loneliness and social dissatisfaction in childhood. Paper presented at annual meeting of the American Educational Research Association, Boston, Mass..
- Patterson, G. J., Kupersmidt, J. B. & Griesler, P. C. (1990). Children's perceptions of self and of relations with others as a function of sociometric status. Child Development (in press).
- Pekarik, E. G., Prinz, R. J., Liebert, D. E. Weintraub, S. & Neale, J. M. (1976). The Pupil Evaluation Inventory: A sociometric technique for assessing children's social behavior. Journal of Abnormal Child Psychology, 4, 83-97.
- Piaget, J. (1932). The moral judgement of the child. Glencoe: Free Press
- Piers, E. V. (1969) Manual for the Piers-Harris Children's Self Concept Scale. Los Angeles: Western Psychological Services.
- Piers, E. V. and Harris, D. B. (1964). Age and other correlates of self-concept in children. Journal of Educational Psychology, 55, 2, 91-95.
- Reynolds, C. R. & Richmond, B. O. (1978). What I Think and Feel: A revised measure of children's manifest anxiety. Journal of Abnormal Child Psychology, 6(2), 271-284.
- Robins, L. N. (1966). Deviant children grown up. Baltimore, M.D.: Williams & Wilkins.
- Roff, M. and Sells, S. (1968). Juvenile delinquency in relation to peer acceptance-rejection and socio-economic status. Psychology in the Schools, 5, 3-18.
- Roff, J. D. and Wirt, R. D. (1984). Childhood aggression and social adjustment as antecedents of delinquency. Journal of Abnormal Child Psychology, 12, 111-126.

- Roff, M., Sells, S. B. & Golden, M. M. (1972). Social adjustment and personality development. Minneapolis: University of Minnesota Press.
- Rolf, J. E. (1972). The social and academic competence of children vulnerable to schizophrenia and other behavior pathologies. Journal of Abnormal Psychology, 80, 225-243.
- Rolf, J. E. (1976). Peer status and the directionality of symptomatic behavior: Prime social competence predictors of outcome for vulnerable children. American Journal of Orthopsychiatry, 46, 74-88.
- Rubin, K. H. (1983). Recent perspectives on social competence and peer status. Child Development, 54, 1383-1385.
- Rubin, K. H. (1982) Non-social play in preschoolers. Necessarily evil? Child Development, 53, 651-657.
- Rubin, K. H. & Daniels-Beirness, T. (1983). Concurrent and predictive correlates of sociometric status in kindergarten and grade 1 children. Merrill-Palmer Quarterly, 29, 337-351.
- Rubin, K. H. (1985). Socially withdrawn children: An "at risk" population? In B. H. Schneider, K. H. Rubin & J. E. Ledingham (Eds.), Peer relationships and social skills in childhood: Issues in assessment and training. New York: Springer-Verlag.
- Rubin, K. H. & Mills, R. S. L. (1988). The many faces of social isolation in childhood. Journal of Consulting and Clinical Psychology, 6, 916-924.
- Sarason, I. G., Sarason, B. R., Patter III, E. H. & Antoni, M. H. (1985). Life events, social support and illness. Psychosomatic Medicine, 47, 2, 156-163.
- Saylor, C. F., Finch, A. J. Spirito, A. and Bennett, B. (1984). The Children's Depression Inventory: A systematic evaluation of psychometric properties. Journal of Consulting and Clinical Psychology, 52, 957-967.

- Singleton, L. C. & Asher, S. R. (1977). Peer preferences and social interaction among third grade children in an integrated school district. Journal of Educational Psychology, 69, 330-336.
- Strauss, C. C., Lahey, B. B. Frick, P., Frame, C. L. & Hynd, G. W. (1988). Peer social status of children with anxiety disorders. Journal of Consulting and Clinical Psychology, 56, 1, 137-141.
- Strauss, C. C., Forehand, R., Smith, K. & Frame, C. (1986). The association between social withdrawal and internalizing problems of children. Journal of Abnormal Child Psychology, 14, 4, 525-535.
- Stavarakaki, C. & Vargo, B. (1985). The relationship between anxiety and depression in children. Unpublished manuscript. Royal Ottawa Hospital.
- Stavarakaki, C., Vargo, B., Roberts, N. and Boodoosingh, L. (1987). The concordance among sources of information for ratings of anxiety and depression in children. American Journal of Psychiatry, 26 (5), 733-737.
- Sullivan, H. S. (1953). The interpersonal theory of psychiatry. New York: Norton.
- Vargo, B. (1988). The relationship of peer rated acceptance, aggression, and withdrawal to concurrent emotional disturbance: A test of the risk hypothesis. Unpublished manuscript. Carleton University.
- Wilkinson, L. (1984). SYSTAT: The System for Statistics. Evanston, IL: SYSTAT, Inc..
- Willingham, W. W. (1959). On deriving standard scores for peer nominations with subgroups of unequal size. Psychological Reports, 5, 397-403.

**THE RELATIONSHIP OF PEER RATED ACCEPTANCE,
AGGRESSION AND WITHDRAWAL TO CONCURRENT
PSYCHOLOGICAL DISTURBANCE: A TEST OF THE RISK
HYPOTHESIS**

INTRODUCTION

The preventative rationale for social skills training with children presupposes a robust relationship between a lack of social competence and "at risk" status for subsequent maladjustment, whether low competence is viewed as cause or effect. This assumed relationship rests on both theoretical and empirical evidence. Theoretically the central role accorded peer interaction for normal psychological development by Piaget (1932), Mead (1934) and Sullivan (1953) has led to the conclusion that children whose peer relations are inadequate will not develop normally and therefore are at risk for subsequent disorder. Empirically there are a number of studies which have provided evidence in support of a relationship between early peer difficulties and subsequent psychological problems (Cowen, Pederson, Babajian, Izzo, and Trost, 1973; Roff, 1963; Roff, Sells, and Golden, 1972; Ullmann, 1957). In addition, implicit in the inclusion of poor peer relations as a criterion for diagnosing three categories of psychological disturbance in childhood - shyness disorder, adjustment disorder with withdrawal and introverted disorder (DSM-III, 1980), is the assumption of an association between peer relations and later disordered outcome.

While a review of the empirical literature generally provides support for the hypothesized relationship between poor peer social relations and "at risk" status for later life difficulties, certain

conceptual and methodological issues remain. There is, for example, no research to indicate whether or not the form of the peer interaction problem bears any correspondence to the form of the disordered outcome. The most commonly used outcome measures in the risk literature are criminality, dropping out of school and adult psychopathology. All of these measures, and criminality in particular, are conceptually related to problems of an externalizing nature, such as aggression. This may explain why of the two social characteristics most frequently used as criteria of "at risk" status - aggression and withdrawal - the empirical evidence is strongest for aggression, with inconsistent findings reported for withdrawal as a predictor of later adjustment problems. As Rubin (1985) has pointed out, it may be unreasonable to expect social withdrawal to be associated with the externalizing problems (criminality, dropping out of school) typically used as outcome measures in the risk literature. Rather it may be more appropriate to assess the disordered outcome of withdrawal through the presence of internalizing problems such as depression, anxiety and/or loneliness. Preliminary evidence for this viewpoint has recently been provided in research by Rubin and Mills (1987) in a longitudinal study of withdrawn children. They found that grade two scores on an observational measure of passive withdrawal significantly predicted grade five scores on a measure of depression, the Children's Depression Inventory (Kovacs, 1983). The present study was designed to test the hypothesis of differentiated outcome dependent on the form of the peer problem (aggression, withdrawal). Specifically data will be gathered to determine whether aggression is related to concurrent problems of an

externalizing nature (hostility) while withdrawal is associated with concurrent problems of an internalizing nature (anxiety).

A second issue which the "at risk" literature has not addressed concerns evidence to indicate a concurrent relationship between peer difficulties and indices of maladjustment. Assuming a continuity between childhood and adult disorder, an examination of the relationship between peer problems and psychological adjustment at an intermediate stage of development could provide evidence regarding the developmental course of psychopathology. Secondly, the assessment of concurrent psychological adjustment may improve the specificity of assessment measures used to select "at risk" children for social skills intervention programs. In evaluating the predictive accuracy of peer relations measures in screening children "at risk", Parker and Asher (1985) found that while the measures were sensitive in identifying those children who would subsequently develop disordered outcomes, they were not specific and overselected children who were not at risk. By combining peer measures with indices of concurrent psychological disturbance it is anticipated that the specificity of the two measures in combination would be heightened, thus reducing the number of false positives. The present study is to obtain concurrent indices of psychological disturbance (hostility and anxiety) for groups of children identified on the basis of peer ratings as sociable, aggressive and withdrawn.

A third issue in the risk literature which requires further exploration is the possibility that the presence of multiple predictors may place a child at greater risk than the presence of either one singularly. Ledingham and Schwartzman (1984) have reported that

aggressive-withdrawn children have poorer academic histories than either aggressive or withdrawn children. The present study will compare the scores on indices of psychological disturbance of a group of children rated by their peers as both aggressive and withdrawn to those of children rated as aggressive and those rated as withdrawn.

A final issue to be explored in the present study concerns the relative strength of association between peer difficulties and adjustment problems for peer ratings of acceptance (Is the child liked?) versus peer ratings of negative social characteristics (What is the child like?). There are a diverse number of strategies for assessing peer relations in children (For reviews see Asher and Hymel, 1981; Dodge and Murphy, 1984; Foster and Ritchey, 1979). However the risk literature is indeterminate in its evidence regarding which measure, or combination of measures, is most strongly associated with disordered outcome. Both a peer acceptance measure, the roster and rating scale (Oden and Asher, 1977), and a peer rated measure of the social characteristics of aggression and withdrawal, the Class Play (Masten, Morison and Pellegrini, 1985), will be administered and the relative power of each will be compared in predicting scores on indices of psychological adjustment.

Exploration of these issues using a school sample of children and a well validated methodology will provide new evidence to test the risk hypothesis. With the present surge of interest in children's peer relationships and the proliferation of social skills training programs, research to update and extend the extant data base of commonly cited studies (Cowen, Pederson, Babijian, Izzo, and Trost, 1973; Roff,

1963; Roff, Sells, and Golden, 1972; Ullmann, 1957) linking peer difficulties to adjustment problems is required.

OBJECTIVES:

1. To examine the concurrent relationship between the social characteristics of aggression and withdrawal and psychological disturbance, operationally defined as elevated scores on self-reports of anxiety and hostility.
2. To determine if a differential relationship exists between the type of self-reported psychological problem and aggression and withdrawal.
3. To examine the relationship between peer rated social acceptance and indices of psychological disturbance.
4. To examine the relative predictive power of a peer rated measure of the social characteristics of aggression and withdrawal and a peer rated measure of social acceptance.

RELEVANT LITERATURE:

"When children are excluded from that informal yet powerful network of peer influence, they are at risk for continued isolation and adjustment problems" (Strain and Kerr, 1981). Studies investigating the prognostic effect of early peer relations difficulties on later adjustment have focused on peer social acceptance and on the social attributes of aggression and withdrawal as predictors of "at risk" status. Criminality, dropping out of school and adult psychopathology have traditionally been the outcome measures used to assess maladjustment.

Acceptance as Predictor:

Both follow-back (Ullmann, 1957; Lambert, 1972) and follow-up studies (Gronlund and Holmlund, 1985; Barclay, 1966; Janes et al., 1979) have been consistent in their finding of a greater risk for low accepted children for the outcome of dropping out of school. Low accepted children leave school before high school graduation at a rate of from two (Janes et al. 1979) to eight (Gronlund and Holmlund, 1958) times greater than that for other children. However subsequent research has indicated that not all low accepted children are at an equal degree of risk for dropping out of school. Kupersmidt (1983) found a differential rate of dropping out for different groups of low status children (popular, rejected and neglected). Thirty percent of rejected children subsequently dropped out compared with 10% of neglected and 4% of popular children. In addition Kupersmidt found that rejected children were two times more likely than either neglected or average children and three times more likely than popular children to be retained at the same grade level at least once.

Acceptance has also been related to the disordered outcome of delinquency. Research by Roff and Sells (1968) on the relationship between juvenile delinquency and measures of peer acceptance-rejection provided support for the importance of peer relations for later adjustment. A four year follow up of a large sample of school children (n=2460) administered sociometric nomination measures in grades 3 to 6 found, using delinquency records as the data source, that there was a disproportionate number of delinquents in the low peer status group. This relationship was observed for only the three upper socioeconomic quartiles; in the fourth SES quartile, the number

Appendix A

of delinquents among the high choice pupils was about as high as the number in the low-choice group. The nonsignificant relationship in the fourth SES quartile was interpreted as being due to the operation of subcultural factors as it was evident from teacher interviews that the high-choice delinquents were better socially integrated than were the low-choice delinquents.

A predictive relationship has also been documented between acceptance and adult psychopathology. In a series of papers Roff (1957, 1960, 1961, 1963, 1966) presented evidence that rejection by peers is strongly prognostic of young adult maladjustment. Using military service records as sources of adult information, Roff found that antagonizing or aggressive behavior during childhood, accompanied by peer rejection, was a significant predictive factor in discriminating "good" outcomes in military service (satisfactory performance with no unfavorable psychiatric or disciplinary reports) from "bad" outcomes of various kinds (psychiatric difficulty, disciplinary trouble, or poor discharge).

Probably the most widely cited evidence in support of the predictive implications of low social acceptance for subsequent psychopathology has been reported by Cowen et al. (1973) in a follow up study of third grade children. Using a battery of instruments including achievement measures, ability measures, academic records, school medical data, self-ratings of anxiety, teacher ratings, and social competence measures (Class Play and Thinking About Yourself), Cowen et al. found that peer ratings were the most significant predictors of later psychiatric disturbance, as indexed by appearance in a psychiatric register.

The relationship between peer acceptance and psychiatric disturbance has also been demonstrated in high risk samples of children. In research investigating the social competence of children vulnerable to psychopathology (Rolf, 1972; 1976), peer ratings significantly discriminated between four target groups of vulnerable children - children of schizophrenic mothers, children of neurotic mothers, clinic children with externalizing symptomatology, clinic children with internalizing symptomatology - and groups of matched and random control children. What is most interesting for purposes of the present investigation is the fact that peer ratings discriminated among the four target groups on the basis of symptomatology associated with each group's primary risk factor. Thus externalizing symptoms were attributed to the group referred for externalizing behaviors while internalizing symptoms were attributed to the group referred for internalizing behavior. Rolf concludes that peer rated social competence, in addition to the presence of externalizing behavior disorders, are the best predictors of which vulnerable children run the risk of poor adult outcome. The present study will assess differentiated outcomes for different types of peer problems in a normal sample of school children.

Aggression and Withdrawal as Predictors:

A consistent finding for follow-back comparisons of dropouts and graduates (Bowman and Matthews, 1960; Kuhlen and Collister, 1952; Lambert, 1972) is that both aggressive and withdrawn children have higher rates of dropping out than do other children. Follow-up studies have reported equivocal results. Havinghurst et al. (1962) found that both aggressive and withdrawn children had

higher rates of dropping out compared to the other children in the sample. Similarly Feldhusen et al. (1973) found that teacher nominated aggressive children were six times more likely to drop out than a group of matched nonaggressive controls. However follow up studies of guidance clinic samples (Janes et al., 1979; Morris et al., 1954) have not resulted in predictability for either aggressive or shy/withdrawn behavior.

The adverse effect of aggression on academic adjustment has been reported in a study by Ledingham and Schwartzman (1984). The academic placement of aggressive (n=122), withdrawn (n=150), aggressive-withdrawn (n=182) and control children (n=299) was compared three years after the initial assessment. Children identified by peers as aggressive-withdrawn or aggressive were more likely to have failed a grade or to be in a special class than were withdrawn children or control. This finding is in support of earlier research by Havinghurst et al. (1962) who reported that children scoring in the top 10% on aggression were twice as likely to have failed a grade during high school. However the study failed to replicate the Havinghurst et al. data with respect to withdrawal. In the Havinghurst et al. study children scoring in the top 10% on withdrawal had three times the rate of school failure for the school as a whole.

A robust relationship between aggression and criminality has been documented in both follow-back and follow-up studies. Feldhusen et al. (1973) reported that teacher-identified aggressive boys and girls in their sample were about twice as likely as nonaggressive children to have later police contact, seven times as

likely to appear in juvenile court and nearly ten times as likely to have a later conviction. Havinghurst et al. (1962) reported that 83% of boys with peer reputations at eleven years for aggressive behavior later committed serious to very serious juvenile offences, compared to about 16% of nonaggressive boys.

In a path analysis of data from the Roff, Sells and Golden (1972) longitudinal study (Roff and Wirt, 1984) childhood aggression, in the context of peer rejection, emerged as the most prominent antecedent of delinquency for males. For females childhood aggression was related to both delinquency and welfare status.

Gibson and Hanson (1969) reporting on a sample of 411 boys, ages 8 years and up, found highly significant associations between peer ratings on a dimension of orderly-disorderly behavior and appearance in juvenile court and unofficial reports of delinquent activity up until the boys' thirteenth birthdays ($p < .001$). More recently Kupersmidt (1983) examined police and juvenile court files for children named by their fifth grade peers as frequently starting fights. She also found that peer ratings of aggression predicted subsequent delinquency.

While the research is consistent in relating aggression to later adjustment problems the evidence linking social withdrawal to disordered outcome is not nearly as compelling. There is some retrospective data (Bower, Shelhammer and Renshaw, 1960; Fleming and Ricks, 1969) to suggest an association between withdrawal and schizophrenia but the follow up studies have failed to bear out the predictive relationship. Michael, Moris and Soroker (1957) in rating the psychological adjustment of adults who had been categorized as

withdrawn on the basis of childhood clinic records, found no greater incidence of schizophrenia among the withdrawn group.

Recently Rubin and Mills (1987) have differentiated between two subtypes of withdrawal - passive withdrawal from the peer group and active withdrawal by the peer group. They have documented that these different subtypes of withdrawal are related to different outcome measures. Passive withdrawal is associated with behavior problems of an internalizing nature such as low perceived competence, loneliness and depression. Conversely active withdrawal is associated with behavior problems of an externalizing nature.

To summarize the available literature has presented evidence in support of an association between poor peer relations and subsequent adjustment problems. However due to the predominantly retrospective nature of the data and inadequacies in the design and methodology of much of the research (For an evaluative review of this literature see Parker and Asher, 1985), further investigation of this important issue is warranted.

METHODOLOGY:

Sample:

Consents were distributed to 372 Grade 5 children in 5 schools in the Carleton Roman Catholic Board: English Sector and 5 schools in the Ottawa Roman Catholic Board: English Sector (See Appendix A for a listing of the schools and information related to sample numbers). Due to the sociometric nature of the data being collected only single grade classes were sampled. Of the consents distributed, 337 were returned, a response rate of 91%. Permission to participate in the

research project was granted for 284 students. At the time of testing, 14 pupils were absent, resulting in a total sample of 270 students. There were 147 male and 123 female subjects. From the total sample several subsamples were selected for analysis based on grouping variables of interest.

Instruments:

Revised Class Play (Masten, Morison, and Pellegrini, 1985) - RCP

Peer relations will be assessed by means of the Revised Class Play, a modification of the original Class Play (Bower, 1960). It asks children to pretend they are directors of an imaginary play and to cast their peers into a variety of positive and negative roles (15 positive and 15 negative). Each role is prefaced by a behavioral descriptor such as "a person who is a good leader", "someone who is often left out", "somebody who picks on other kids".

The psychometric properties of the scale have been examined for a sample of 612 elementary school children in grades 3 to 6 (Masten, Morison, and Pellegrini, 1985). Factor analysis of item responses resulted in the extraction of three factors accounting for 64% of the variance. On the basis of item composition, the three factors were labeled sociability/leader, aggressive/disruptive, and sensitive/isolated. Correlational analysis has indicated the relative independence of the factors ie. they are measuring separate dimensions of peer relations.

The instrument is scored to reflect the three dimensions identified through factor analysis - positive, disruptive, and isolated. A child's score is computed as the total number of votes received for the items which constitute the relevant factor. The obtained factor

scores have been demonstrated to be consistent across sexes and stable over time (6 and 17 month intervals. Concurrent validity with teacher rated behavior has been documented. Evidence of convergent validity is supplied by a significant relationship with the constructs of academic competence and intelligence. Support for the discriminant validity of the scale is found in the nonsignificant relationship between factor scores and socioeconomic status (Masten, Morison and Pellegrini, 1985).

The Revised Class Play technique of assessing peer relations is well accepted by children who enjoy casting their classmates in roles in an imaginary play. Due to the multiplicity of roles, the likelihood of negative labeling by peers is averted. Information obtained from the Revised Class Play can be used to identify children deficient in the social skills necessary to make and maintain the quality of peer relations necessary for normal social development.

The Roster and Rating Scale (Oden and Asher, 1977)

The roster and rating scale method of assessing social acceptance has each children rate his/her peers according to specified criteria (play with, work with) on a Likert type rating scale ranging from 1 to 5 . A child's score is the average rating received from classmates with a low score indicative of low acceptance. The Roster and Rating Scale has been demonstrated to be a reliable measure of social acceptance ($r_{\text{median}}=.82$ "play with" and $r_{\text{median}}=.84$ "work with" criterion over a 6 week period) (Oden and Asher, 1977). Support for the validity of the rating sociometric scale is found in the form of significant correlations with peer nomination scores (Oden and Asher, 1977; Green et al., 1980; Gresham, 1981).;

Appendix A

The rating sociometric scale was selected for the present study as it provides a measure of social acceptance of all children in the classroom and can be used to identify groups of socially accepted and rejected children.

The Children's Concerns Inventory (Buhrmester, 1982) - CCI

The Children's Concern Inventory is a measure of situation specific anxiety designed for use with elementary school children in third- through sixth grade. The scale's 28 items assess anxiety related to schoolwork performance, peer acceptance, adult discipline and sports competition. A child's score is the average of the seven items making up each subscale with lower scores indicative of greater anxiety. Summing across the four situational subscales provides a measure of general anxiety similar to that provided by other trait measures of anxiety, such as the Revised Children's Manifest Anxiety Scale (Reynolds and Richmond, 1979).

The CCI has been demonstrated (Buhrmester, 1982) to be moderately stable over a three week test-retest interval, with subscale correlations ranging from .51 (schoolwork performance) to .73 (adult discipline). Concurrent validity of the scale has been evaluated by correlating it with Spielberger's Trait Anxiety Scale for Children (1973). The total score on the CCI correlated .55 for boys and .49 for girls with scores on the STAIC. Regression of all five CCI subscale scores on Spielberger's scale yielded multiple Rs of .60 for boys and .50 for girls.

A multi-trait multi-method test of the convergent and discriminant validity of the scale provided evidence that the subscales of the inventory possessed construct validity correlating

Appendix A

more highly with theoretically related variables than with theoretically unrelated variables. The peer acceptance subscale was significantly related to both a peer sociometric measure ($r_{91} = -.28$, $p < .01$) and to a self-report measure of perceived competence in social relations ($r_{91} = -.40$, $p < .01$).

The Hostility Inventory for Children (Vargo and Daniels-Bierness, 1988) - HIC

The Hostility Inventory for Children is a self-report measure of hostility, adapted from the Buss-Durkee Hostility-Guilt Inventory (Buss and Durkee, 1957). It consists of 30 items in a four choice format measuring the clinical dimensions of assaultive behavior (5 items), indirect hostility (4 items), negativism (4 items), irritability (4 items), resentment (4 items), suspicion (4 items) and verbal aggression (5 items). A child's score for each dimension of hostility is the mean score of the items composing a particular subscale. The lower the score the higher the self-reported hostility.

Procedure:

All grade five children in the selected schools who had parental consent were administered the Revised Class Play (Masten, Morison and Pellegrini, 1985), the Hostility Inventory for Children (Vargo and Daniels-Bierness, 1988), the Children's Concerns Inventory (Buhrmester, 1982) and the Roster and Rating Scale (Oden and Asher, 1977) by research personnel. Due to documented sex bias in peer nominations (Rolf, 1976), only same sex nominations on the Revised Class Play and Roster and Rating Scale were solicited.

Individualized copies of the RCP were prepared for each classroom. Items were stated at the top of the page, three items per

Appendix A

page, with names of same sex peers available for nomination listed below. For each item children were asked to circle the names of three peers that they felt best suited the role described. A child's score for each item was the total nominations received from same sex peers. These raw item scores were standardized for sex and classroom size and then factor scores were derived by adding and averaging the items comprising the factors of sociability/leadership; aggressive/disruptive and sensitive/isolated.

Based on children's Revised Class Play scores, groups of aggressive/disruptive ($n=31$), shy/withdrawn ($n=23$), and sociable children ($n=29$) were identified and their scores on the measures of anxiety and hostility compared. The criterion for group assignment was scores which deviated one standard deviation from the classroom mean on a relevant factor. In addition a group of average children ($n=25$) were selected. Average children were those children whose factor scores on the RCP ranged between .5 standard deviations above and below the mean rating.

The Roster and Rating Scale was administered after the RCP. Following a demonstration of how to use the rating scale, each child rated his/her same sex peers on a scale of from 1 to 5 for the criterion of how much they liked to spend time in school with the person. A child's score was calculated as the average rating received. Groups of popular and unpopular children were selected on the basis of sociometric ratings. Popular children ($n=45$) were defined as those children receiving an average rating of greater than 4.0. Unpopular children ($n=44$) were those children receiving an average rating less than 2.5. These cut-off points corresponded to 1

Appendix A

standard deviation above and below the average mean rating for the total sample.

The Children's Concerns Inventory and the Hostility Inventory for Children were administered in counterbalanced order. Factor scores were calculated for each measure by summing and averaging the items comprising each factor. (See Appendices B-E for instruments and factor composition.)

Data Analysis:

The data was analyzed using the SYSTAT (Wilkinson, 1987) statistical package on a Macintosh SE microcomputer. A variety of statistical techniques were used ranging in complexity from descriptive statistics (means, standard deviation) to univariate (Anova, correlation) and multivariate (Manova, Multiple Regression) statistics. Hypotheses to be tested included the following:

1. Children rated by their peers as aggressive or withdrawn will evidence greater symptomatology of psychological disturbance than children rated by their peers as sociable.
2. Children rated by their peers as unpopular will evidence greater symptomatology of psychological disturbance than children rated by their peers as popular.
3. Children rated by their peers as aggressive or withdrawn will be less well accepted by their peers than children rated as sociable.

Appendix A

4. A relationship exists between the nature of the peer problem and the nature of the reported concurrent psychological disturbance. Specifically children rated by their peers as withdrawn will evidence symptoms of an internalizing nature (anxiety) to a greater extent than problems of an externalizing nature (hostility), while the reverse will be true for children rated by their peers as aggressive.

ORGANIZATION OF THE RESULTS SECTION:

Descriptive statistics by groups are presented in Tables 2, 7, 11 and graphically in Figures 1-10. Results of correlational analyses are presented next followed by the results of Manovas conducted to test for group differences on the dependent variables. Group differences on the dependent variables were assessed for groups selected on the basis of two different measures of peer relations - a measure of peer rated social characteristics, The Revised Play, and a measure of peer rated social status, The Roster and Rating Scale. A comparison of the group assignment of the two measures indicated that while there is considerable overlap, the measures do not necessarily identify the same groups of children (62% of sociable children, 45% of aggressive and 48% of withdrawn were identified by both measures). In addition group differences on the dependent variables were assessed for sex. Results for the three separate grouping variables on the factors of the hostility and anxiety inventories, sociometric ratings, and factors of the Revised Class Play are presented separately. Findings from multiple regression analyses conducted to select the best predictor(s) of psychological adjustment from the two peer

Appendix A

measures follow. The results of a series of supplementary analyses conclude the results section.

RESULTS:

Correlational Analysis:

Table 1 shows the correlation matrix of the social adjustment and psychological adjustment measures. The leadership/sociability factor of the RCP showed an inverse relationship with both the aggressive/disruptive factor ($r=-.355$) and the sensitive/isolated factor ($r=-.433$), while the aggressive/disruptive and sensitive/isolated factors were independent ($r=-.024$). The two peer rated measures were moderately correlated ($r=.686$ RCPSOC/SOCRATE; $r=-.441$ RCPAG/SOCRATE; $r=-.440$ RCPWI/SOCRATE). Correlations between the subscales of the anxiety inventory were moderate, ranging from $r=.546$ to $r=.346$, while the subscales of the hostility inventory demonstrated relatively little overlap (range $r=.008$ to $r=.321$). The two measures of psychological adjustment showed little relationship, with the strongest association being between the peer subscale of the anxiety inventory and the resentment and suspicion subscales of the hostility inventory ($r=.323$ and $r=.321$ respectively).

Manovas:Groups based on peer rated social characteristics (RCP) -

Using a criterion of 1 s.d. above the mean on a relevant factor, 29 children were identified as sociable, 31 as aggressive and 23 as withdrawn. Three cases met the criterion on both the sociable and aggressive factors and two cases met the criterion on both the

Appendix A

aggressive and withdrawn factors. These cases were not used in the group analysis.

1. Composite index of psychological adjustment

A one way Manova (Table 3) for a composite index of psychological adjustment (total hostility score and total anxiety score) was conducted to test the hypothesis that children rated by their peers as aggressive or withdrawn report greater anxiety and/or hostility symptoms than do children rated by their peers as sociable. Support for the hypothesis was provided by a significant overall $F_{4,158}=4.743$, $p<.00$. Aggressive and withdrawn children could be distinguished from sociable children by lower mean scores on the global hostility index ($F_{1,80}=15.6$, $p<.00$ for aggressive children and ($F_{1,80}=8.17$, $p<.005$ for withdrawn children). (Note: Lower mean scores denote greater symptomatology). The contrast between withdrawn and sociable children on the global measure of anxiety just missed being significant at conventional levels ($F_{1,80}=3.68$, $p<.059$).

2. Sociometric Ratings

Results of a one-way Anova (Table 3) indicated group means on peer ratings of acceptance were significantly different ($F_{2,80}=82.41$, $p<.000$). Contrasts between the means of the three groups (sociable, aggressive, withdrawn) indicated significant differences between the sociable and aggressive groups ($F_{1,80}=123.98$ $p<.000$); between the sociable and withdrawn groups ($F_{1,80}=119.58$, $p<.000$) with mean ratings for the sociable group higher than for the other two groups. Sociometric ratings between

the aggressive and withdrawn groups were not significantly different.

A supplementary analysis was conducted in which the mean scores of the sociable group were compared to an average group of children, operationally defined as children scoring between .5 s.d. above and below the mean on all three factors. Results of this analysis indicated significantly higher mean ratings for the sociable group compared to the average group ($F_{1,104}=30.14$, $p<.000$).

3. Hostility Inventory for Children (physical assault, indirect, resentment, irritability, negativism, suspicion, verbal assault)
The results of a one-way Manova (Table 3) was significant ($F_{14,148}=1.979$, $p<.02$) indicating significant mean differences between the three groups on the factors of resentment, and suspicion. Contrasts to determine which pairs of groups were significantly different yielded significant results for the sociable vs. aggressive groups ($F_{7,74}=2.44$, $p<.02$) on the subscales of physical assault, indirect hostility, negativism, suspicion; for the sociable vs. withdrawn groups ($F_{7,74}=2.69$, $p<.01$) for the factors of negativism and suspicion. The overall F statistic for the comparison of the the aggressive and withdrawn groups was nonsignificant ($F_{7,74}=.942$, $p<.48$). In an analysis of the four groups (sociable, aggressive, withdrawn, average) the sociable group could be discriminated from the average group ($F_{7,98}=2.85$, $p<.00$) on the subscales of negativism, resentment, and verbal assault.

4. The Children's Concerns Inventory (school anxiety, peer anxiety, adult discipline anxiety, sports anxiety)

A one-way Manova (Table 3) yielded no significant mean group differences on the factors of the anxiety inventory.

Groups based on sociometric ratings - Defining popular children as those children whose mean score exceeded 4 and unpopular children as those children whose mean score was less than 2.5, 45 popular and 44 unpopular children were identified.

1. The Revised Class Play (leadership/sociability, aggressive/disruptive, sensitive/isolated)

A one-way Manova (Table 5) of the scores of the popular vs. the unpopular children on the factors of the RCP resulted in an overall significant F ($F_{3,85} = 77.79, p < .00$). Univariate results indicated that the mean scores of popular children were higher for the sociability factor while the mean scores of the unpopular group were higher for the aggressive and isolated factors.

2. The Hostility Inventory for Children

Results of a one-way Manova (Table 5) indicated significant mean differences between children rated as popular and those rated as unpopular ($F_{7,81} = 6.03, p < .00$) on the factors of indirect hostility, resentment, and suspicion. On each of these factors unpopular children reported greater symptoms of hostility.

3. The Children's Concerns Inventory

Results of a one-way Manova (Table 5) indicated significant mean differences ($F_{4,84} = 3.707, p < .00$) between popular and unpopular children on the factor of anxiety with regard to peers. The mean

scores of the unpopular group were significantly lower than those of the popular group, indicating greater anxiety about peer relations.

Groups based on sex: Significant differences on all of the dependent variables, with the exception of the RCP, were found. In subsequent factorial Manovas (groups X sex) on the dependent variables, the interaction effect was found to be nonsignificant.

1. **Sociometric Ratings**

An Anova (Table 7) conducted on peer sociometric ratings showed a significant difference in mean scores received by boys ($X=3.178$) compared to girls ($X=3.378$) ($F_{1,268}=4.49$, $p<.035$).

2. **The Hostility Inventory for Children**

A Manova (Table 7) conducted on the subscales of the HIC revealed significant sex differences in hostility (overall $F_{7,262}=3.69$, $p<.00$). While males had higher mean scores on all the factors of the HIC, univariate results indicated significant differences for the factors of physical assault, irritability and verbal assault.

3. **The Children's Concerns Inventory**

Significant sex differences in anxiety were found on the factors of the CCI (overall $F_{4,264}=7.38$, $p<.00$) (Table 7). While females reported greater symptoms than males for all the factors of the CCI only for the factors of school and sports anxiety were the mean differences significant ($F_{1,267}=8.293$, $p<.004$ and $F_{1,267}=17.06$, $p<.000$ respectively).

Regression analyses:

Two regression analyses were conducted to determine which of the two peer rated measures was the best predictor of psychological maladjustment. For the global measure of self-reported hostility, the sociability/leadership factor of the RCP was the best predictor ($R^2=.069$). The sensitive/isolated factor of the RCP was the single best predictor of the global measure of self-reported anxiety ($R^2=.022$). The peer rated measure of social acceptance (Roster and Rating Scale) did not add significantly to the amount of explained variance for either hostility or anxiety.

Supplementary Analyses:

Three supplementary analyses were performed to try and clarify the relationship between social maladjustment (aggression and withdrawal) and psychological maladjustment (hostility and anxiety). Samples of children were selected according to the following criteria: 1) those children scoring 1.5 s.d. above the mean on a relevant factor of the RCP; 2) children identified as both unpopular and socially maladjusted (aggressive or withdrawn); 3) children scoring 1 s.d. above the mean on a cluster of items on the RCP withdrawal factor denoting isolation from the peer group and/or on a cluster of items on the RCP withdrawal factor denoting rejection by the peer group (Rubin and Mills, 1987). In general the results parallel those previously reported: 1) self-reported hostility symptoms were more powerful than self-reported anxiety symptoms in discriminating between the groups; 2) the aggressive and withdrawn groups reported a similar pattern of scores on the two measures of psychological adjustment.

DISCUSSION:

Results from the present study provide evidence linking social maladjustment and psychological maladjustment. On the basis of both peer ratings of social characteristics (RCP) and of social acceptance (Roster and Rating Scale), children with peer problems could be differentiated from socially adjusted children by the presence of greater self-reported symptoms of disturbance on a composite index of psychological adjustment (hostility and anxiety). This evidence of concurrent symptomatology in socially maladjusted children collaborates research which has reported a predictive relationship between early peer problems and subsequent maladjustment (Cowen et al., 1973). Results of the present study also confirm previous findings of a relationship between peer ratings of social acceptance and ratings of social characteristics (Dodge, 1983). Although there was not a one to one correspondence (mean $r=.50$), in general unpopular children were rated as aggressive or withdrawn while popular children were rated as sociable.

The present results extend previous findings, both by providing evidence of a concurrent relationship between peer problems and psychological adjustment, and by specifying the nature of the symptomatology associated with poor peer relations. Unpopular children, compared to popular children, reported greater symptoms of hostility and anxiety. The two groups could be differentiated on the basis of the hostility subscales of indirect hostility, resentment and suspicion, and the anxiety subscale relating to peers. Similarly children identified by peers as aggressive or withdrawn could be

differentiated from children identified by peers as sociable by the presence of greater hostility symptomatology. Symptoms of anxiety did not discriminate between sociable and withdrawn or aggressive children.

Research findings from the present study failed to provide strong evidence for the hypothesized relationship between the nature of the peer problem and the nature of the concurrent psychological disturbance, although a non-significant trend emerged. The aggressive group had higher mean scores on the subscales of the hostility inventory while the withdrawn group tended to have higher mean scores on the subscales of the anxiety inventory. This is particularly apparent in the graphs depicting the standardized mean scores of the two groups (See figures 1-10). Other evidence supporting a relationship between the nature of the peer problems and the nature of the psychological adjustment problem comes from the finding that, using a criterion of 1 s.d. above the mean on the global index of anxiety, three times as many of the withdrawn compared to the sociable and aggressive children were identified as anxious (22% of withdrawn; 7% sociable; 7% aggressive). Results of regression analyses conducted to determine the best predictors of maladjustment provides other evidence linking withdrawal and anxiety. RCP withdrawal factor scores were the most powerful predictors of the global index of anxiety. In addition on the composite index of psychological adjustment (hostility and anxiety), the aggressive group could be distinguished from the sociable group on the hostility dimension alone while for the withdrawn group the

distinction between the sociable group on the anxiety dimension was very close to being statistically significant ($p < .059$).

The failure to distinguish between the aggressive and withdrawn groups in the present sample could be attributed to several sources. First it may have been that the grade 5 children were unable to differentiate between the two dimensions of aggression and withdrawal. Ledingham, Younger, Schwartzman and Bergeron (1982) found age related differences in the capacity of children to make distinctions between behavioral categories. With increasing age children's judgements of behavior progress from an unidimensional, deviant-nondeviant, viewpoint to a more multidimensional, differentiated viewpoint. Ledingham et al. found Grade 7 students were able to make the same distinctions between dimensions of behavior that are characteristic of adult judgements. Perhaps Grade 5 children have not yet arrived at that stage of cognitive development in which they are able to distinguish between aggressive and withdrawn behavior. This lack of differentiation between the two dimensions could have resulted in a random nomination of children as aggressive or withdrawn. This hypothesis receives tentative support from the finding that aggressive and withdrawn children received similar ratings of social acceptance. Conversely the children may have differentiated between the two dimensions, but the pattern of symptomatology in the two groups may be similar and the failure to differentiate the two groups could be a reflection of this.

A third plausible explanation is that the measures of psychological disturbance used in the present study were not sensitive enough to

pick up on the differences between the groups, either because the symptoms represented were nonspecific, the wording of the items was ambiguous, or that the items were so transparent that children responded in a socially desirable way, the more seriously disturbed minimizing their symptoms the greatest. The validity of the two self-report measures used to assess psychological disturbance (HIC, CCI) must be addressed in subsequent research by collecting data from other sources such as teachers and parents on psychological disturbance in children experiencing peer problems .

A fourth explanation is that the withdrawal factor of the RCP may have confounded withdrawal from the peer group and rejection by the peer group (Rubin and Mills, 1987) leading to a mixture of aggression and withdrawal in the group identified as withdrawn. To explore this possibility standardized scores for each subject were computed on the items of the RCP withdrawal factor that Rubin and Mills indicate represent withdrawal from the peer group (items 3, 11, 18, 24) and those that indicate rejection by the peer group (items 17, 14, 12) . Children whose scores were 1 s.d. above the mean on a relevant item cluster were identified as isolated ($n=14$), rejected ($n=22$), or mixed isolated/rejected ($n=13$). The mean scores of the rejected group were significantly lower (indicative of greater symptomatology) than the isolated group on the irritability, negative and verbal assault subscales of the hostility inventory (overall $F_{7,40}=2.452$, $p<.00$). The isolated group could also be discriminated from the mixed group by higher mean scores (less symptomatology) on the negativism subscale of the hostility index. As in previous analyses the differences between the means of the two groups on the

Appendix A

anxiety subscales were non-significant. Findings from this analysis suggest that separating the two item clusters of the RCP does not greatly facilitate a differentiation between the symptomatology of aggressive and withdrawn children.

It is apparent that the hostility measure (HIC) used in the present study was a more powerful discriminating variable between the groups than the anxiety measure (CCI). Anxiety may be too nonspecific an index of maladjustment to be a sensitive outcome measure of withdrawal. In support of this hypothesis an examination of standardized global anxiety scores for children in the sample indicated that many children reported severe anxiety symptoms (7% had scores >1.5 s.d. below the mean) but that anxiety was not confined to children identified as withdrawn. (Note: lower scores are indicative of greater symptomatology).

Another interesting finding of the present study is the significant sex differences on the two indices of psychological adjustment. Males reported a greater number of symptoms of hostility while females reported a greater number of symptoms of anxiety. These sex differences closely parallel the stereotype of males as displaying more overt symptoms and females more covert symptoms.

Evidence from the present study with regard to choosing among the various measures of social competence most predictive of maladjustment, indicates that peer ratings of social characteristics are more predictive of concurrent psychological disturbance than are peer ratings of social acceptance. Sociometric ratings showed nonsignificant correlations with the two global indices of maladjustment ($r=.220$ with hostility and $r=.091$ with anxiety).

FUTURE DIRECTIONS:

Future research investigating the relationship between peer problems and psychological adjustment must proceed along both practical and theoretical lines. From a practical viewpoint, the psychometric properties of the two measures of adjustment used in the present study must be investigated more extensively, especially for the HIC. The factorial validity of the clinically derived subscales must be assessed. In addition the validity of peer ratings must be addressed by documenting the concordance between peer ratings and information obtained from other sources such as teachers and parents. A more sensitive outcome measure for withdrawal must also be found. Depression is one such possibility.

On a more theoretical level, future research must be conducted to explore the influence of mediating variables, such as self-concept or available social support, on the relationship between peer problems and maladjustment. There may be children who choose to isolate themselves from the peer group because they enjoy being by themselves. One boy in the present study wrote on the front of his RCP booklet that he knew he wasn't going to be rated very highly by his peers (and he wasn't) but that he didn't care because he liked himself. These children with a positive self-concept would not be thought to be at risk. Similarly children rated by their peers as socially maladjusted but who perceived themselves to have a strong supportive social network would not be as at great a risk for concurrent psychological disturbance as children who feel alone and lonely.

Another factor which may have an influence on the relationship between peer problems and psychological maladjustment is developmental in nature. As the peer group assumes greater importance in adolescence, children who are not socially accepted become more obviously ostracized by the group ("nerd", "geek", "wimp") and at this time may be at greater risk for psychopathology.

These and other pertinent issues should form the basis for future research examining the relationship between social maladjustment and psychological adjustment.

CONCLUSIONS:

The main findings of the present study can be summarized as follows:

1. On a composite measure of psychological adjustment, aggressive and withdrawn children reported greater symptomatology than sociable children.
2. greater self-reported hostility for both aggressive and withdrawn groups compared to sociable group based on the Revised Class Play. Self-reported anxiety did not discriminate between groups.
3. greater self-reported hostility and anxiety for unpopular children based on sociometric ratings.
4. children rated by their peers as aggressive or withdrawn were less accepted by their peers than children rated as sociable.
5. significant sex differences on self-reported hostility and anxiety
6. hostility measure has more discriminative power. Both hostility and anxiety factors discriminated between social status groups based on sociometric ratings but only hostility factors discriminated between social characteristics groups based on RCP.

7. failed to confirm hypothesis that nature of peer problem is related to the nature of psychological adjustment problem, although a nonsignificant trend emerged.

The present study has provided evidence supporting a relationship between peer problems and concurrent symptoms of psychological disturbance. Future research must address such issues as the influence of self-concept and perceived social support on the relationship between social adjustment and psychological adjustment. In addition the search must continue for a sensitive outcome measure of withdrawal. Research on this topic has far reaching implications for children's mental health. Early identification and intervention can prevent the more serious consequences of social maladjustment.

BIBLIOGRAPHY:

- American Psychiatric Association (1980). Diagnostic and Statistical Manual of Mental Disorders.
- Asher, S. R. & Hymel, S. (1981). Children's social competence in peer relations: Sociometric and behavioral assessment. In J. D. Wine & M. D. Smye (Eds.), Social competence. New York: Guilford.
- Barclay, J. R. (1966). Sociometric choices and teacher ratings as predictors of school dropout. Journal of Social Psychology, 4, 40-45.
- Bowman, D. H. & Matthews, C. V. (1960). Motivations of youth for leaving school. U. S. Office of Education Cooperative Research Program (Project 200).
- Bower, E. M. (1960). Early identification of emotionally handicapped children in school. Springfield, Ill, : Charles C. Thomas.
- Bower, E. M., Shelhammer, T.A. & Daily, J. M. (1968). Social characteristics of male adolescents who later became schizophrenics. American Journal of Orthopsychiatry, 30, 712-729.
- Buhrmester, D. (1982). Children's Concerns Inventory Manual. Department of Psychology, University of Denver, 2040 South York, Colorado 80208.
- Buss, L.A. H. & Durkee, L.A. (1957). An inventory for assessing different kinds of hostility. Journal of Consulting Psychology, 21, 343-349.
- Cowen, E. L., Pederson, A, Babigian, H., Izzo, L.D. and Trost, M.A. (1973). Long-tem follow-up of early detected vulnerable children. Journal of Consulting and Clinical Psychology, 438 -446.
- Dodge, K. A. (1983). Behavioral antecedents of peer social status. Child Development, 54, 1386-1389.
- Dodge, K. A. & Murphy, R. R. (1984). The assessment of social competence in adolescents. In P. Karoly & J. J. Steffen (Eds.),

Advances in Child Behavioral Analysis and Therapy. Volume Three. Lexington, Mass: D. C. Heath & Co..

- Feldhusen, J. F., Thurston, J. R. & Benning, J. J. (1973). A longitudinal study of delinquency and other aspects of children's behavior.; International Journal of Criminology and Penology, 1, 341-351.
- Flemming, D. & Ricks, D. F. (1970). Emotions of children before schizophrenia and before character disorder. In M. Roff & D. F. Ricks (Eds.), Life history research in psychopathology (Vol. 1). Minneapolis: University of Minnesota Press.
- Foster, S. L. & Ritchey, W. L. (1979). Issues in the assessment of social competence in children. Journal of Applied Behavioral Analysis, 12, 625-638.
- Gibson, H.B. and Hanson, R. (1969). Peer ratings as predictors of school behavior and delinquency. British Journal of Social and Clinical Psychology, 8, 313-322.
- Green, K.D., Forehand, R., Beck, S.J., and Vosk, B. (1980). An assessment of the relationship among measures of children's social competence and children's academic achievement. Child Development, 51, 1149-1156.
- Gronlund, N. E. & Holmlund, W. S. (1958). The value of elementary school sociometric status scores for predicting pupil's adjustment in high school. Educational Administration and Supervision, 44, 225-260.
- Hartup, W.W. (1970). Peer interaction and social organization. In P. H. Mussen (Ed.) Manual of Child Psychology (3rd ed.) New York: Wiley.
- Havinghurst, R. J., Bowman, P. H. , Liddle, C. P., Matthews, C. V. & Pierce, J. V. (1962). Growing up in River City. New York: Wiley.
- Janes, C. L., Hesselbrock, V. M., Myers, D.G. & Penniman, J. H. (1979). Problem boys in young adulthood: Teacher's ratings and twelve-year follow-up. Journal of Youth and Adolescence, 8, 453-472.
- Kazdin, A.E., Esveltd-Dawson, K., Unis, A.S. and Rancurello, M.D. (1983). Child and parent evaluations of depression and aggression in

Appendix A

- psychiatric inpatient children. Journal of Abnormal Child Psychology, 11:3, 401-413.
- Kovacs, M. (1983). The Children's Depression Inventory. Unpublished manuscript, University of Pittsburgh School of Medicine.
- Kuhlen, R. & Collister, E. G. (1952). Sociometric status of sixth- and ninth- graders who fail to finish high school. Educational and Psychological Measurement, 12, 632-637.
- Kupersmidt, J. B. (1983). Predicting delinquency and academic problems from childhood peer status. Symposium presented at the biennial meeting of the Society for Research in Child Development, Detroit, Ill.
- Lambert, N. A. (1972). Intellectual and nonintellectual predictors of high school status. Journal of Scholastic Psychology, 6, 247-259.
- Ledingham, J.E., Younger, A. Schwartzman, A. & Bergeron, G. (1982). Agreement among teacher, peer, and self-ratings of children's aggression, withdrawal, and likability. Journal of Abnormal Child Psychology, 10(3), 363-372.
- Ledingham, J. LE. & Schwartzman, A. E. (1984). A 3-year follow-up of aggressive and withdrawn behavior in childhood: Preliminary findings. Journal of Abnormal Child Psychology, 12, 157-168.
- Masten, A. S., Morison, P. and Pellegrini, D.S. (1985). A revised class play method of peer assessment. Developmental Psychology, 21:3, 523-533.
- Mead, G. H. (1934). Mind, self and society. Chicago, Ill.: University of Chicago Press.
- Michael, C. M., Morris, D. P. & Soroker, E. (1957). Follow-up studies of shy, withdrawn children II: Relative incidence of schizophrenia. American Journal of Orthopsychiatry, 27, 331-337.
- Morris, D. P., Soroker, E. & Burruss, G. (1954). Follow-up studies of shy, withdrawn children I: Evaluation of later adjustment. American Journal of Orthopsychiatry, 24, 743-754.

- Oden, S. & Asher, S. R. (1977). Coaching children in social skills for friendship making. Child Development, 48, 495-506.
- Parker, J. G. & Asher, S. R. (1985). Peer acceptance and later personal adjustment: Are low-accepted children "at risk"? Unpublished manuscript. University of Illinois, Urbana-Champaign.
- Piaget, J. (1932). The moral judgement of the child. Glencoe: Free Press
- Reynolds, C.R. and Richmond, B.O. (1980). Factor structure and construct validity of "What I Think and Feel"; The Revised Children's Manifest Anxiety Scale. Journal of Personality Assessment, 43:3, 271-280.
- Robins, L. N. (1966). Deviant children grown up. Baltimore, M.D.: Williams & Wilkins.
- Roff, M. (1961). Childhood social interaction and young adult bad conduct. Journal of Abnormal and Social Psychology, 63, 33-337.
- Roff, M. (1963). Childhood social interactions and young adult psychosis. Journal of Clinical Psychology, 19, 152-157.
- Roff, M. (1957). Preservice personality problems and subsequent adjustments to military service: the prediction of psychoneurotic reactions. School of Aviation Medicine, USAG, Report No. 57-136.
- Roff, M. (1960). Relations between certain preservice factors and psychoneurosis during military duty. Armed Forces Medical Journal, 11 152-160.
- Roff, M. and Sells, S. (1968). Juvenile delinquency in relation to peer acceptance-rejection and socio-economic status. Psychology in the Schools, 5, 3-18.
- Rolf, J.E. (1972). The social and academic competence of children vulnerable to schizophrenia and other behavior pathologies. Journal of Abnormal Psychology, 80, 225-243.
- Rolf, J.E. (1976). Peer status and the directionality of symptomatic behavior: Prime social competence predictors of outcome for

- vulnerable children. American Journal of Orthopsychiatry, 46, 74-88.
- Roff, M., Sells, S. B. & Golden, M. M. (1972). Social adjustment and personality development. Minneapolis: University of Minnesota Press.
- Rubin, K. H. (1985). Socially withdrawn children: An "at risk" population? In B. H. Schneider, K. H. Rubin & J. E. Ledingham (Eds.), Peer relationships and social skills in childhood: Issues in assessment and training. New York: Springer-Verlag.
- Rubin, K. H. & Mills, R. S. L. (1987). The many faces of social isolation in childhood. Paper presented at the annual meeting of the Canadian Psychological Association.
- Sells, S.B. and Roff, M. (1967). Peer acceptance-rejection and personality development. Final Report, Project No. OE5-04171, U.S. Department of Health Education and Welfare.
- Spielberger, C. D. (1973). STAIC Preliminary Manual. Palo Alto, Calif: Consulting Psychologists Press, Inc..
- Strain P.S. and Kerr, M. M. (1981). Modifying children's social withdrawal: Issue in assessment and clinical intervention. In M. Hersen, R. Eisler & P. Miller (Eds.), Progress in Behavior Modification, Volume II. Academic Press.
- Wilkinson, Leland (1987). SYSTAT: The System for Statistics. Evanston, Il: SYSTAT, Inc.
- Sullivan, H. S. (1953). The interpersonal theory of psychiatry. New York: Norton.
- Ullmann, C. A. (1957). Teachers, peers, and tests as predictors of adjustment. Journal of Educational Psychology, 48, 257-267.

Appendix B

REVISED CLASS PLAY

FROM THE LIST OF NAMES OF STUDENTS IN THIS CLASS, CHOOSE THE ONE PERSON WHO BEST FITS EACH DESCRIPTION. WRITE THE CODE NUMBER FOR THAT PERSON IN THE SPACE PROVIDED. IF THERE IS MORE THAN ONE PERSON WHO FITS THE DESCRIPTION, WRITE THEIR CODE NUMBER AS WELL. YOU MAY CHOOSE THE SAME PERSON FOR SEVERAL OF THE ITEMS BUT YOU ARE NOT TO CHOOSE YOURSELF FOR ANY OF THE ITEMS.

1. Someone who is a good leader _____
2. Someone who gets into a lot of fights _____
3. Someone who would rather be
alone than with others _____
4. A person who enjoys being around
other people. _____
5. Someone who has many friends _____
6. Someone who loses their temper easily _____
7. Someone who has trouble making
friends _____
8. Someone who wants everything
done their way _____
9. Someone everyone likes to be with _____
10. Someone who shows off a lot _____
11. Someone whose feelings are easily hurt _____
12. Someone who has a good sense of humor _____
13. Someone who teases other children
too much _____
14. Someone who is usually sad or unhappy _____
15. Someone who makes friends easily _____
16. Someone who tries to get other
people into trouble _____

Appendix B

17. Someone who is very shy _____
18. Someone everyone listens to _____
19. Someone who destroys other
people's property _____
20. Someone who is often left out _____
21. Someone who has good ideas for things
to do _____
22. Someone who picks on other kids _____
23. Someone who is sort of ignored _____
24. Someone who is usually happy _____
25. A person who is too bossy _____
26. Someone who never seems to be
having a good time _____
27. A person who interrupts when
other children are speaking _____
28. A person who can't get others
to listen _____
29. A person who has very few
friends _____
30. Someone who helps other people
when they need it _____

Appendix B

SCALE STRUCTURE

SOCIABLE

1. Someone who is a good leader
4. A person who enjoys being around other people
5. Someone who has many friends
9. Someone everyone likes to be with
12. Someone who has a good sense of humor.
15. Someone who makes friends easily.
18. Someone everyone listens to.
21. Someone who has good ideas for things to do.
24. Someone who is usually happy.
30. Someone who helps other people when they need it.

AGGRESSIVE

2. Someone who gets into a lot of fights.
6. Someone who loses their temper easily.
8. Someone who wants everything done their way.
10. Someone who shows off a lot.
13. Someone who teases other children too much.
16. Someone who tries to get other people into trouble.
19. Someone who destroys other people's property.
22. Someone who picks on other kids.
25. A person who is too bossy.
27. A person who interrupts when other children are speaking.

WITHDRAWN

3. Someone who would rather be alone than with others.
7. Someone who has has trouble making friends.
11. Someone whose feelings are easily hurt.
14. Someone who is usually sad or unhappy.
17. Someone who is very shy.
20. Someone who is often left out.
23. Someone who is sort of ignored.
26. Someone who never seems to be having a good time.
28. A person who can't get others to listen.
29. A person who has very few friends.

Appendix C

Name: _____ School: _____

H.I.C. (R)

The following are statements which children your age have made about what makes them angry and how they feel when they are angry. Please indicate how true each statement is for you.

	Never True	Seldom True	Often True	Always True
1. When I am mad, I slam doors.	1	2	3	4
2. When someone insults me or my family, they are asking for a fight.	1	2	3	4
3. Unless someone asks me in a nice way, I won't do what they ask.	1	2	3	4
4. When I disapprove of someone's behavior I let them know it.	1	2	3	4
5. I have the feeling that others are laughing at me.	1	2	3	4
6. Whenever I do something well, nobody seems to notice it.	1	2	3	4
7. I have a bad temper.	1	2	3	4
8. When somebody hits me first, I let them have it.	1	2	3	4
9. When someone is bossy, I do the opposite of what they want.	1	2	3	4
10. When I get mad I say mean and nasty things.	1	2	3	4
11. I am rude to people I don't like.	1	2	3	4
12. I show my anger by pounding my fist on the table.	1	2	3	4
13. I believe that others blame me for their mistakes.	1	2	3	4
14. I have to yell at people to get them to listen to me.	1	2	3	4

Appendix C

	Never True	Seldom True	Often True	Always True
15. When I lose my temper, I feel like hitting someone.	1	2	3	4
16. When I can't get my own way I pout.	1	2	3	4
17. I feel people are always doing things to bother me.	1	2	3	4
18. When I am angry I pick up the nearest thing and throw it.	1	2	3	4
19. I feel angry about the way other people treat me.	1	2	3	4
20. You can't trust anyone.	1	2	3	4
21. I get into a lot of fights.	1	2	3	4
22. I can't help getting into arguments when people disagree with me.	1	2	3	4
23. I feel angry when I have to wait for someone to finish what they're doing.	1	2	3	4
24. When people are bossy, I take my time just to show them.	1	2	3	4
25. I feel angry when I'm told I did something wrong in front of others.	1	2	3	4
26. I break rules I don't agree with.	1	2	3	4
27. I make threats I don't really mean to carry out.	1	2	3	4
28. I think that people who continually pester you are asking for a punch in the nose.	1	2	3	4
29. People blame me for things that are not my fault.	1	2	3	4
30. I get angry when things don't go my way.	1	2	3	4
31. I am often angrier inside than I show on the outside.	1	2	3	4
32. I feel as if I'm going to explode with anger.	1	2	3	4
33. When I am mad at someone I refuse to speak to them.	1	2	3	4
34. People never listen to what I have to say.	1	2	3	4
35. It feels like everyone is out to get me.	1	2	3	4

Appendix C

HOSTILITY INVENTORY FOR CHILDREN**Assaultive Behavior**

- 2. When someone insults me or my family, they are asking for a fight.
- 8. When somebody hits me first, I let them have it.
- 15. When I really lose my temper, I feel like hitting someone.
- 21. I get into a lot of fights.
- 28. I think that people who continually pester you are asking for a punch in the nose.

Indirect Hostility

- 1. When I am mad, I slam doors.
- 11. I am rude to people I don't like.
- 12. I show my anger by pounding my fist on the table.
- 16. When I can't get my own way I pout.
- 18. When I am angry I pick up the nearest thing and throw it.

Irritability

- 7. I have a bad temper.
- 23. I feel angry when I have to wait for someone to finish what they're doing.
- 30. I get angry when things don't go my way.
- 31. I am often angrier inside than I show on the outside.
- 32. I feel as if I'm going to explode with anger.

Negativism

- 3. Unless somebody asks me in a nice way, I won't do what they want.
- 9. When someone is bossy, I do the opposite of what they ask.
- 24. When people are bossy, I take my time just to show them.
- 26. I break rules I don't agree with.
- 33. When I am mad at someone I refuse to speak to them.

Resentment

- 6. Whenever I do something well, nobody seems to notice it.
- 19. I feel angry about the way other people treat me.
- 29. People blame me for things that are not my fault.
- 25. I feel angry when I'm told I did something wrong in front of others.
- 34. People never listen to what I have to say.

Suspicion

- 5. I have the feeling that others are laughing at me.
- 13. I believe that others blame me for their mistakes.
- 17. I feel people are always doing things to bother me.
- 20. You can't trust anyone.
- 35. It feels like everyone is out to get me.

Verbal Assault

- 4. When I disapprove of someone's behavior I let them know it.
- 10. When I get mad I say mean and nasty things.
- 14. I have to yell at people to get them to listen to me.
- 22. I can't help getting into arguments when people disagree with me.
- 27. I make threats I don't really mean to carry out.

Appendix D

FACTOR STRUCTURE OF THE HOSTILITY INVENTORY FOR CHILDREN-REVISED

Item	Number	Rotated Factor Loadings	
		Overt	Covert
1		.479	.227
2		.661	.131
3		.433	.219
4		.303	.064
5		-.095	.707
6		.043	.741
7		.458	.349
8		.796	.080
9		.547	.097
10		.608	.164
11		.635	.159
12		.480	.083
13		.302	.558
14		.415	.390
15		.771	.242
16		.122	.363
17		.164	.602
18		.376	.310
19		.068	.678
20		.105	.628
21		.647	.077
22		.429	.458
24*		.487	-.051
25		.508	.330
26		.740	.160
27		.470	.339
28		.712	.017
29		.325	.620
30		.416	.431
31		.165	.595
32		.387	.522
33		.437	.360
34		.081	.590
35		.100	.738

*23 was omitted from the questionnaire by error

HOSTILITY INVENTORY FOR CHILDREN-REVISED

ITEM - SUMMARY SCORE CORRELATIONS

The letters in parenthesis indicate whether the item is correlated with the overt or covert summary score.

1. When I am mad, I slam doors.(O)	.541
2. When someone insults me or my family, they are asking for a fight.(O)	.654
3. Unless someone asks me in a nice way, I won't do what they ask.(O)	.494
4. When I disapprove of someone's behavior I let them know it.(O)	.370
5. I have the feeling that others are laughing at me.(C)	.636
6. Whenever I do something well, nobody seems to notice it.(C)	.704
7. I have a bad temper.(C)	.503
8. When somebody hits me first, I let them have it.(O)	.763
9. When someone is bossy, I do the opposite of what they want.(O)	.579
10. When I get mad I say mean and nasty things.(O)	.624
11. I am rude to people I don't like.(O)	.645
12. I show my anger by pounding my fist on the table.(O)	.475
13. I believe that others blame me for their mistakes.(C)	.611
14. I have to yell at people to get them to listen to me.(O)	.515
15. When I lose my temper, I feel like hitting someone.(O)	.804
16. When I can't get my own way I pout.(O)	.274
17. I feel people are always doing things to bother me.(C)	.595

18. When I am angry I pick up the nearest thing and throw it.(O)	.455
19. I feel angry about the way other people treat me.(C)	.656
20. You can't trust anyone.(C)	.627
21. I get into a lot of fights.(O)	.604
22. I can't help getting into arguments when people disagree with me.(O)	.559
23. I feel angry when I have to wait for someone to finish what they're doing.(C)	omitted by error
24. When people are bossy, I take my time just to show them.(O)	.457
25. I feel angry when I'm told I did something wrong in front of others.(C)	.492
26. I break rules I don't agree with.(O)	.729
27. I make threats I don't really mean to carry out.(O)	.588
28. I think that people who continually pester you are asking for a punch in the nose.(O)	.674
29. People blame me for things that are not my fault.(C)	.695
30. I get angry when things don't go my way.(C)	.565
31. I am often angrier inside than I show on the outside.(C)	.609
32. I feel as if I'm going to explode with anger.(C)	.645
33. When I am mad at someone I refuse to speak to them. (O)	.552
34. People never listen to what I have to say.(C)	.592
35. It feels like everyone is out to get me.(C)	.685

DATE: _____

READ EACH QUESTION CAREFULLY. PUT A CIRCLE AROUND THE WORD "YES" IF YOU THINK IT IS TRUE ABOUT YOU. PUT A CIRCLE AROUND THE WORD "NO" IF YOU THINK IT IS NOT TRUE ABOUT YOU.

1. I have trouble making up my mind.	YES	NO
2. I get nervous when things do not go the right way for me.	YES	NO
3. Others seem to do things easier than I can.	YES	NO
4. I like everyone I know.	YES	NO
5. Often I have trouble getting my breath.	YES	NO
6. I worry a lot of the time.	YES	NO
7. I am afraid of a lot of things.	YES	NO
8. I am always kind.	YES	NO
9. I get mad easily.	YES	NO
10. I worry about what my parents will say to me.	YES	NO
11. I feel that others do not like the way I do things.	YES	NO
12. I always have good manners.	YES	NO
13. It is hard for me to get to sleep at night.	YES	NO
14. I worry about what other people will think about me.	YES	NO
15. I feel alone even when there are people with me.	YES	NO
16. I am always good.	YES	NO
17. Often I feel sick in my stomach.	YES	NO
18. My feelings get hurt easily.	YES	NO
19. My hands feel sweaty.	YES	NO
20. I am always nice to everyone.	YES	NO
21. I am tired a lot.	YES	NO
22. I worry about what is going to happen.	YES	NO
23. Other children seem happier than I.	YES	NO
24. I tell the truth every single time.	YES	NO
25. I have bad dreams.	YES	NO

APPENDIX F

-2-

26. My feelings get hurt easily when I am fussed at.	YES	NO
27. I feel someone will tell me I do things the wrong way.	YES	NO
28. I never get angry.	YES	NO
29. I wake up scared some of the time.	YES	NO
30. I worry when I go to bed at night.	YES	NO
31. It is hard for me to keep my mind on my schoolwork.	YES	NO
32. I never say things I shouldn't.	YES	NO
33. I wiggle in my seat a lot.	YES	NO
34. I am nervous.	YES	NO
35. A lot of people are against me.	YES	NO
36. I never lie.	YES	NO
37. I often worry about something bad happening to me.	YES	NO

CD INVENTORY

: _____ DATE: _____

KIDS SOMETIMES HAVE DIFFERENT FEELINGS AND IDEAS.

THIS FORM LISTS THE FEELINGS AND IDEAS IN GROUPS. FROM EACH GROUP PICK ONE SENTENCE THAT DESCRIBES YOU BEST FOR THE PAST TWO WEEKS. AFTER YOU PICK A SENTENCE FROM THE FIRST GROUP, GO ON TO THE NEXT GROUP.

THERE IS NO RIGHT ANSWER OR WRONG ANSWER. JUST PICK THE SENTENCE THAT BEST DESCRIBES THE WAY YOU HAVE BEEN RECENTLY. PUT A MARK LIKE THIS "X" NEXT TO YOUR ANSWER. PUT THE MARK IN THE BOX NEXT TO THE SENTENCE THAT YOU PICK.

HERE IS AN EXAMPLE OF HOW THIS FORM WORKS. TRY IT. PUT A MARK NEXT TO THE SENTENCE THAT DESCRIBES YOU BEST.

EXAMPLE:

____ I READ BOOKS ALL THE TIME

____ I READ BOOKS ONCE IN A WHILE

____ I NEVER READ BOOKS

REMEMBER, PICK OUT THE SENTENCES THAT DESCRIBED YOUR FEELINGS AND IDEAS IN THE PAST TWO WEEKS.

1. ____ I AM SAD ONCE IN A WHILE

____ I AM SAD MANY TIMES

____ I AM SAD ALL THE TIME

2. ____ NOTHING WILL EVER WORK OUT FOR ME

____ I AM NOT SURE IF THINGS WILL WORK OUT FOR ME

____ THINGS WILL WORK OUT FOR ME O.K.

3. ____ I DO MOST THINGS O.K.

____ I DO MANY THINGS WRONG

____ I DO EVERYTHING WRONG

APPENDIX G

-2-

4.

I HAVE FUN IN MANY THINGS

I HAVE FUN IN SOME THINGS

NOTHING IS FUN AT ALL

5.

I AM BAD ALL THE TIME

I AM BAD MANY TIMES

I AM BAD ONCE IN A WHILE

6.

I THINK ABOUT BAD THINGS HAPPENING TO ME ONCE IN A WHILE

I WORRY THAT BAD THINGS WILL HAPPEN TO ME

I AM SURE THAT TERRIBLE THINGS WILL HAPPEN TO ME

7.

I HATE MYSELF

I DO NOT LIKE MYSELF

I LIKE MYSELF

8.

ALL BAD THINGS ARE MY FAULT

MANY BAD THINGS ARE MY FAULT

BAD THINGS ARE NOT USUALLY MY FAULT

9.

I DO NOT THINK ABOUT KILLING MYSELF

I THINK ABOUT KILLING MYSELF BUT I WOULD NOT DO IT

I WANT TO KILL MYSELF

APPENDIX G

10. ☐ I FEEL LIKE CRYING EVERY DAY
 ☐
 ☐ I FEEL LIKE CRYING MANY DAYS
 ☐
 ☐ I FEEL LIKE CRYING ONCE IN A WHILE
 ☐
11. ☐ THINGS BOTHER ME ALL THE TIME
 ☐
 ☐ THINGS BOTHER ME MANY TIME
 ☐
 ☐ THINGS BOTHER ME ONCE IN A WHILE
 ☐
12. ☐ I LIKE BEING WITH PEOPLE
 ☐
 ☐ I DO NOT LIKE BEING WITH PEOPLE MANY TIMES
 ☐
 ☐ I DO NOT WANT TO BE WITH PEOPLE AT ALL
 ☐
13. ☐ I CANNOT MAKE UP MY MIND ABOUT THINGS
 ☐
 ☐ IT IS HARD TO MAKE UP MY MIND ABOUT THINGS
 ☐
 ☐ I MAKE UP MY MIND ABOUT THINGS EASILY
 ☐
14. ☐ I LOOK O.K.
 ☐
 ☐ THERE ARE SOME BAD THINGS ABOUT MY LOOKS
 ☐
 ☐ I LOOK UGLY
 ☐
15. ☐ I HAVE TO PUSH MYSELF ALL THE TIME TO DO MY SCHOOLWORK
 ☐
 ☐ I HAVE TO PUSH MYSELF MANY TIMES TO DO MY SCHOOLWORK
 ☐
 ☐ DOING SCHOOLWORK IS NOT A BIG PROBLEM
 ☐

APPENDIX G

16. ☐ I HAVE TROUBLE SLEEPING EVERY NIGHT
 ☐
 ☐ I HAVE TROUBLE SLEEPING MANY NIGHTS
 ☐
 ☐ I SLEEP PRETTY WELL
 ☐
17. ☐ I AM TIRED ONCE IN A WHILE
 ☐
 ☐ I AM TIRED MANY DAYS
 ☐
 ☐ I AM TIRED ALL THE TIME
 ☐
18. ☐ MOST DAYS I DO NOT FEEL LIKE EATING
 ☐
 ☐ MANY DAYS I DO NOT FEEL LIKE EATING
 ☐
 ☐ I EAT PRETTY WELL
 ☐
19. ☐ I DO NOT WORRY ABOUT ACHES AND PAINS
 ☐
 ☐ I WORRY ABOUT ACHES AND PAINS MANY TIMES
 ☐
 ☐ I WORRY ABOUT ACHES AND PAINS ALL THE TIME
 ☐
20. ☐ I DO NOT FEEL ALONE
 ☐
 ☐ I FEEL ALONE MANY TIMES
 ☐
 ☐ I FEEL ALONE ALL THE TIME
 ☐
21. ☐ I NEVER HAVE FUN AT SCHOOL
 ☐
 ☐ I HAVE FUN AT SCHOOL ONLY ONCE IN A WHILE
 ☐
 ☐ I HAVE FUN AT SCHOOL MANY TIMES
 ☐

22.

I HAVE PLENTY OF FRIENDS

I HAVE SOME FRIENDS, BUT I WISH I HAD MORE

I DO NOT HAVE ANY FRIENDS

23.

MY SCHOOL WORK IS ALRIGHT

MY SCHOOL WORK IS NOT AS GOOD AS BEFORE

I DO VERY BADLY IN SUBJECTS I USED TO BE GOOD IN

24.

I CAN NEVER BE AS GOOD AS OTHER KIDS

I CAN BE AS GOOD AS OTHER KIDS IF I WANT TO

I AM JUST AS GOOD AS OTHER KIDS

25.

NOBODY REALLY LOVES ME

I AM NOT SURE IF ANYBODY LOVES ME

I AM SURE THAT SOMEBODY LOVES ME

26.

I USUALLY DO WHAT I AM TOLD

I DO NOT DO WHAT I AM TOLD MOST TIMES

I NEVER DO WHAT I AM TOLD

27.

I GET ALONG WITH PEOPLE

I GET INTO FIGHTS MANY TIMES

I GET INTO FIGHTS ALL THE TIME

YOUTH SELF-REPORT FOR AGES 11-18

YOUR AGE	YOUR SEX ☐ Boy ☐ Girl	GRADE IN SCHOOL	YOUR NAME
YOUR RACE ☐ Black ☐ White ☐ Other (specify) _____	TODAY'S DATE Mo. _____ Date _____ Yr. _____		PARENT'S TYPE OF WORK (Please be specific — for example: auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.) FATHER'S TYPE OF WORK: _____ MOTHER'S TYPE OF WORK: _____
	DATE OF BIRTH Mo. _____ Date _____ Yr. _____		

- I. Please list the sports you most like to take part in. For example: swimming, baseball, skating, skate boarding, bike riding, fishing, etc.

☐ None

a. _____

b. _____

c. _____

Compared to others of your age, about how much time do you spend in each?

Less Than Average Average More Than Average

☐ ☐ ☐

☐ ☐ ☐

☐ ☐ ☐

Compared to others of your age, how well do you do each one?

Below Average Average Above Average

☐ ☐ ☐

☐ ☐ ☐

☐ ☐ ☐

- II. Please list your favorite hobbies, activities, and games, other than sports. For example: cards, books, piano, crafts, etc. (Do not include T.V.)

☐ None

a. _____

b. _____

c. _____

Compared to others of your age, about how much time do you spend in each?

Less Than Average Average More Than Average

☐ ☐ ☐

☐ ☐ ☐

☐ ☐ ☐

Compared to others of your age, how well do you do each one?

Below Average Average Above Average

☐ ☐ ☐

☐ ☐ ☐

☐ ☐ ☐

- III. Please list any organization, clubs, teams or groups you belong to.

☐ None

a. _____

b. _____

c. _____

Compared to others of your age, how active are you in each?

Less Active Average More Active

☐ ☐ ☐

☐ ☐ ☐

☐ ☐ ☐

- IV. Please list any jobs or chores you have. For example: Paper route, babysitting, making bed, etc.

☐ None

a. _____

b. _____

c. _____

Compared to others of your age, how well do you carry them out?

Below Average Average Above Average

☐ ☐ ☐

☐ ☐ ☐

☐ ☐ ☐

V. 1. About how many close friends do you have? ☐ None ☐ 1 ☐ 2 or 3 ☐ 4 or more

2. About how many times a week do you do things with them? ☐ less than 1 ☐ 1 or 2 ☐ 3 or more

VI. Compared to others of your age, how well do you:

	Worse	About the same	Better
a. Get along with your brothers & sisters?	☐	☐	☐
b. Get along with other kids?	☐	☐	☐
c. Get along with your parents?	☐	☐	☐
d. Do things by yourself?	☐	☐	☐

VII. Current school performance

	Failing	Below Average	Average	Above Average
☐ I do not go to school				
a. English	☐	☐	☐	☐
b. Math	☐	☐	☐	☐
Other subjects: c. _____	☐	☐	☐	☐
d. _____	☐	☐	☐	☐
e. _____	☐	☐	☐	☐
f. _____	☐	☐	☐	☐
g. _____	☐	☐	☐	☐

Please describe any concerns or problems you have about school

APPENDIX H

11 of items that describe kids. For each item that describes you now or within the past 6 months, please circle the :
often true of you. Circle the 1 if the item is somewhat or sometimes true of you. If the item is not true of you, circle 153

0 = Not True 1 = Somewhat or Sometimes True 2 = Very True or Often True

0	1	2	1. I act too young for my age
0	1	2	2. I have an allergy (describe): _____
			_____
			_____
0	1	2	3. I argue a lot
0	1	2	4. I have asthma
0	1	2	5. I act like the opposite sex
0	1	2	6. I like animals
0	1	2	7. I brag
0	1	2	8. I have trouble concentrating or paying attention
0	1	2	9. I can't get my mind off certain thoughts (describe): _____
			_____
			_____
0	1	2	10. I have trouble sitting still
0	1	2	11. I'm too dependent on adults
0	1	2	12. I feel lonely
0	1	2	13. I feel confused or in a fog
0	1	2	14. I cry a lot
0	1	2	15. I am pretty honest
0	1	2	16. I am mean to others
0	1	2	17. I daydream a lot
0	1	2	18. I deliberately try to hurt or kill myself
0	1	2	19. I try to get a lot of attention
0	1	2	20. I destroy my things
0	1	2	21. I destroy things belonging to others
0	1	2	22. I disobey my parents
0	1	2	23. I disobey at school
0	1	2	24. I don't eat as well as I should
0	1	2	25. I don't get along with other kids
0	1	2	26. I don't feel guilty after doing something I shouldn't
0	1	2	27. I am jealous of others
0	1	2	28. I am willing to help others when they need help
0	1	2	29. I am afraid of certain animals, situations, or places, other than school (describe): _____
			_____
			_____
0	1	2	30. I am afraid of going to school
0	1	2	31. I am afraid I might think or do something bad
0	1	2	32. I feel that I have to be perfect
0	1	2	33. I feel that no one loves me
0	1	2	34. I feel that others are out to get me
0	1	2	35. I feel worthless or inferior
0	1	2	36. I accidentally get hurt a lot
0	1	2	37. I get in many fights
0	1	2	38. I get teased a lot
0	1	2	39. I hang around with kids who get in trouble

0	1	2	40. I hear things that nobody else seems able to hear (describe): _____
			_____
			_____
0	1	2	41. I act without stopping to think
0	1	2	42. I like to be alone
0	1	2	43. I lie or cheat
0	1	2	44. I bite my fingernails
0	1	2	45. I am nervous or tense
0	1	2	46. Parts of my body twitch or make nervous movements (describe): _____
			_____
			_____
0	1	2	47. I have nightmares
0	1	2	48. I am not liked by other kids
0	1	2	49. I can do certain things better than most kids
0	1	2	50. I am too fearful or anxious
0	1	2	51. I feel dizzy
0	1	2	52. I feel too guilty
0	1	2	53. I eat too much
0	1	2	54. I feel overtired
0	1	2	55. I am overweight
			56. Physical problems without known medical cause:
0	1	2	a. Aches or pains
0	1	2	b. Headaches
0	1	2	c. Nausea, feel sick
0	1	2	d. Problems with eyes (describe): _____
			_____
			_____
0	1	2	e. Rashes or other skin problems
0	1	2	f. Stomachaches or cramps
0	1	2	g. Vomiting, throwing up
0	1	2	h. Other (describe): _____
			_____
			_____
0	1	2	57. I physically attack people
0	1	2	58. I pick my skin or other parts of my body (describe): _____
			_____
			_____
0	1	2	59. I can be pretty friendly
0	1	2	60. I like to try new things
0	1	2	61. My school work is poor
0	1	2	62. I am poorly coordinated or clumsy
0	1	2	63. I would rather be with older kids than with kids my own age

APPENDIX H

0 = Not True

1 = Somewhat or Sometimes True

2 = Very True or Often True

- 0 1 2 64. I would rather be with younger kids than with kids my own age
- 0 1 2 65. I refuse to talk
- 0 1 2 66. I repeat certain actions over and over (describe): _____
- _____
- _____
- 0 1 2 67. I run away from home
- 0 1 2 68. I scream a lot
- 0 1 2 69. I am secretive or keep things to myself
- 0 1 2 70. I see things that nobody else seems able to see (describe): _____
- _____
- _____
- 0 1 2 71. I am self-conscious or easily embarrassed
- 0 1 2 72. I set fires
- 0 1 2 73. I can work well with my hands
- 0 1 2 74. I show off or clown
- 0 1 2 75. I am shy
- 0 1 2 76. I sleep less than most kids
- 0 1 2 77. I sleep more than most kids during day and/or night (describe): _____
- _____
- _____
- 0 1 2 78. I have a good imagination
- 0 1 2 79. I have a speech problem (describe): _____
- _____
- _____
- 0 1 2 80. I stand up for my rights
- 0 1 2 81. I steal things at home
- 0 1 2 82. I steal things from places other than home
- 0 1 2 83. I store up things I don't need (describe): _____
- _____
- _____
- 0 1 2 84. I do things other people think are strange (describe): _____
- _____
- _____

- 0 1 2 85. I have thoughts that other people would think are strange (describe): _____
- _____
- _____
- 0 1 2 86. I am stubborn
- 0 1 2 87. My moods or feelings change suddenly
- 0 1 2 88. I enjoy being with other people
- 0 1 2 89. I am suspicious
- 0 1 2 90. I swear or use dirty language
- 0 1 2 91. I think about killing myself
- 0 1 2 92. I like to make others laugh
- 0 1 2 93. I talk too much
- 0 1 2 94. I tease others a lot
- 0 1 2 95. I have a hot temper
- 0 1 2 96. I think about sex too much
- 0 1 2 97. I threaten to hurt people
- 0 1 2 98. I like to help others
- 0 1 2 99. I am too concerned about being neat or clean
- 0 1 2 100. I have trouble sleeping (describe): _____
- _____
- _____
- 0 1 2 101. I cut classes or skip school
- 0 1 2 102. I don't have much energy
- 0 1 2 103. I am unhappy, sad, or depressed
- 0 1 2 104. I am louder than other kids
- 0 1 2 105. I use alcohol or drugs other than for medical conditions (describe): _____
- _____
- _____
- 0 1 2 106. I try to be fair to others
- 0 1 2 107. I enjoy a good joke
- 0 1 2 108. I like to take life easy
- 0 1 2 109. I try to help other people when I can
- 0 1 2 110. I wish I were of the opposite sex
- 0 1 2 111. I keep from getting involved with others
- 0 1 2 112. I worry a lot

Please write down anything else that describes your feelings, behavior, or interests

CHILD BEHAVIOR CHECKLIST—TEACHER'S REPORT FORM

PUPIL'S NAME			SCHOOL
PUPIL'S AGE	PUPIL'S SEX ☐ Boy ☐ Girl	ETHNIC GROUP OR RACE	PARENTS' TYPE OF WORK (Please be as specific as you can—for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.)
GRADE	THIS FORM FILLED OUT BY ☐ Teacher (name) _____ ☐ Counselor (name) _____ ☐ Other (specify) _____ name: _____		FATHER'S TYPE OF WORK: _____ MOTHER'S TYPE OF WORK: _____
DATE			Please try to answer each item as completely as possible, even if you lack full information.

I. How long have you known this pupil?

II. How well do you know him/her? ☐ Very Well ☐ Moderately Well ☐ Not Well

III. How much time does he/she spend in your class per week?

IV. What kind of class is it? (Please be specific, e.g., regular 5th grade, 7th grade math, etc.)

V. Has he/she ever been referred for special class placement, services, or tutoring?

☐ No ☐ Don't Know ☐ Yes—what kind and when?

VI. Has he/she ever repeated a grade?

☐ No ☐ Don't Know ☐ Yes—grade and reason

VII. Current school performance—list academic subjects and check appropriate column:

Academic subject	1. Far below grade	2. Somewhat below grade	3. At grade level	4. Somewhat above grade	5. Far above grade
1. _____	☐	☐	☐	☐	☐
2. _____	☐	☐	☐	☐	☐
3. _____	☐	☐	☐	☐	☐
4. _____	☐	☐	☐	☐	☐
5. _____	☐	☐	☐	☐	☐
6. _____	☐	☐	☐	☐	☐

Below is a list of items that describe pupils. For each item that describes the pupil now or within the past 2 months, please circle the 2 if the item is very true or often true of the pupil. Circle the 1 if the item is somewhat or sometimes true of the pupil. If the item is not true of the pupil, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to this pupil.

0 = Not True (as far as you know)			1 = Somewhat or Sometimes True			2 = Very True or Often True		
0	1	2	1. Acts too young for his/her age	0	1	2	31. Fears he/she might think or do something bad	
0	1	2	2. Hums or makes other odd noises in class	0	1	2	32. Feels he/she has to be perfect	
0	1	2	3. Argues a lot	0	1	2	33. Feels or complains that no one loves him/her	
0	1	2	4. Fails to finish things he/she starts	0	1	2	34. Feels others are out to get him/her	
0	1	2	5. Behaves like opposite sex	0	1	2	35. Feels worthless or inferior	
0	1	2	6. Defiant, talks back to staff	0	1	2	36. Gets hurt a lot, accident-prone	
0	1	2	7. Bragging, boasting	0	1	2	37. Gets in many fights	
0	1	2	8. Can't concentrate, can't pay attention for long	0	1	2	38. Gets teased a lot	
0	1	2	9. Can't get his/her mind off certain thoughts; obsessions (describe): _____	0	1	2	39. Hangs around with others who get in trouble	
0	1	2	10. Can't sit still, restless, or hyperactive	0	1	2	40. Hears things that aren't there (describe): _____	
0	1	2	11. Clings to adults or too dependent	0	1	2	41. Impulsive or acts without thinking	
0	1	2	12. Complains of loneliness	0	1	2	42. Likes to be alone	
0	1	2	13. Confused or seems to be in a fog	0	1	2	43. Lying or cheating	
0	1	2	14. Cries a lot	0	1	2	44. Bites fingernails	
0	1	2	15. Fidgets	0	1	2	45. Nervous, high-strung, or tense	
0	1	2	16. Cruelty, bullying, or meanness to others	0	1	2	46. Nervous movements or twitching (describe): _____	
0	1	2	17. Daydreams or gets lost in his/her thoughts	0	1	2	47. Overconforms to rules	
0	1	2	18. Deliberately harms self or attempts suicide	0	1	2	48. Not liked by other pupils	
0	1	2	19. Demands a lot of attention	0	1	2	49. Has difficulty learning	
0	1	2	20. Destroys his/her own things	0	1	2	50. Too fearful or anxious	
0	1	2	21. Destroys property belonging to others	0	1	2	51. Feels dizzy	
0	1	2	22. Difficulty following directions	0	1	2	52. Feels too guilty	
0	1	2	23. Disobedient at school	0	1	2	53. Talks out of turn	
0	1	2	24. Disturbs other pupils	0	1	2	54. Overtired	
0	1	2	25. Doesn't get along with other pupils	0	1	2	55. Overweight	
0	1	2	26. Doesn't seem to feel guilty after misbehaving	0	1	2	56. Physical problems without known medical cause:	
0	1	2	27. Easily jealous	0	1	2	a. Aches or pains	
0	1	2	28. Eats or drinks things that are not food (describe): _____	0	1	2	b. Headaches	
				0	1	2	c. Nausea, feels sick	
				0	1	2	d. Problems with eyes (describe): _____	
				0	1	2	e. Rashes or other skin problems	
				0	1	2	f. Stomachaches or cramps	
0	1	2	29. Fears certain animals, situations, or places other than school (describe): _____	0	1	2	g. Vomiting, throwing up	
				0	1	2	h. Other (describe): _____	
0	1	2	30. Fears going to school					

APPENDIX I

Not True

1 = Somewhat or Sometimes True

2 = Very True or Often True

158

- 0 1 2 57. Physically attacks people
- 0 1 2 58. Picks nose, skin, or other parts of body (describe): _____
- 0 1 2 59. Sleeps in class
- 0 1 2 60. Apathetic or unmotivated
- 0 1 2 61. Poor school work
- 0 1 2 62. Poorly coordinated or clumsy
- 0 1 2 63. Prefers being with older children
- 0 1 2 64. Prefers being with younger children
- 0 1 2 65. Refuses to talk
- 0 1 2 66. Repeats certain acts over and over, compulsions (describe): _____
- 0 1 2 67. Disrupts class discipline
- 0 1 2 68. Screams a lot
- 0 1 2 69. Secretive, keeps things to self
- 0 1 2 70. Sees things that aren't there (describe): _____
- 0 1 2 71. Self-conscious or easily embarrassed
- 0 1 2 72. Messy work
- 0 1 2 73. Behaves irresponsibly (describe): _____
- 0 1 2 74. Showing off or clowning
- 0 1 2 75. Shy or timid
- 0 1 2 76. Explosive and unpredictable behavior
- 0 1 2 77. Demands must be met immediately, easily frustrated
- 0 1 2 78. Inattentive, easily distracted
- 0 1 2 79. Speech problem (describe): _____
- 0 1 2 80. Stares blankly
- 0 1 2 81. Feels hurt when criticized
- 0 1 2 82. Steals
- 0 1 2 83. Stores up things he/she doesn't need (describe): _____

- 0 1 2 84. Strange behavior (describe): _____
- 0 1 2 85. Strange ideas (describe): _____
- 0 1 2 86. Stubborn, sullen, or irritable
- 0 1 2 87. Sudden changes in mood or feelings
- 0 1 2 88. Sulks a lot
- 0 1 2 89. Suspicious
- 0 1 2 90. Swearing or obscene language
- 0 1 2 91. Talks about killing self
- 0 1 2 92. Underachieving, not working up to potential
- 0 1 2 93. Talks too much
- 0 1 2 94. Teases a lot
- 0 1 2 95. Temper tantrums or hot temper
- 0 1 2 96. Seems preoccupied with sex
- 0 1 2 97. Threatens people
- 0 1 2 98. Tardy to school or class
- 0 1 2 99. Too concerned with neatness or cleanliness
- 0 1 2 100. Fails to carry out assigned tasks
- 0 1 2 101. Truancy or unexplained absence
- 0 1 2 102. Underactive, slow moving, or lacks energy
- 0 1 2 103. Unhappy, sad, or depressed
- 0 1 2 104. Unusually loud
- 0 1 2 105. Uses alcohol or drugs (describe): _____
- 0 1 2 106. Overly anxious to please
- 0 1 2 107. Dislikes school
- 0 1 2 108. Is afraid of making mistakes
- 0 1 2 109. Whining
- 0 1 2 110. Unclean personal appearance
- 0 1 2 111. Withdrawn, doesn't get involved with others
- 0 1 2 112. Worrying
113. Please write in any problems the pupil has that were not listed above:
- 0 1 2 _____
- 0 1 2 _____
- 0 1 2 _____

1. My classmates make fun of meyes	no	21. I am good in my school workyes	no
2. I am a happy personyes	no	22. I do many bad thingsyes	no
3. It is hard for me to make friendsyes	no	23. I can draw wellyes	no
4. I am often sadyes	no	24. I am good in musicyes	no
5. I am smartyes	no	25. I behave badly at homeyes	no
6. I am shyyes	no	26. I am slow in finishing my school work.....yes	no
7. I get nervous when the teacher calls on meyes	no	27. I am an important member of my classyes	no
8. My looks bother meyes	no	28. I am nervousyes	no
9. When I grow up, I will be an important personyes	no	29. I have pretty eyesyes	no
10. I get worried when we have tests in schoolyes	no	30. I can give a good report in front of the classyes	no
11. I am unpopularyes	no	31. In school I am a dreameryes	no
12. I am well behaved in schoolyes	no	32. I pick on my brother(s) and sister(s)yes	no
13. It is usually my fault when something goes wrongyes	no	33. My friends like my ideasyes	no
14. I cause trouble to my familyyes	no	34. I often get into troubleyes	no
15. I am strongyes	no	35. I am obedient at homeyes	no
16. I have good ideasyes	no	36. I am luckyyes	no
17. I am an important member of my familyyes	no	37. I worry a lot.....yes	no
18. I usually want my own wayyes	no	38. My parents expect too much of meyes	no
19. I am good at making things with my handsyes	no	39. I like being the way I amyes	no
20. I give up easilyyes	no	40. I feel left out of thingsyes	no

41. I have nice hairyes no
42. I often volunteer in schoolyes no
43. I wish I were differentyes no
44. I sleep well at nightyes no
45. I hate schoolyes no
46. I am among the last to be chosen for gamesyes no
47. I am sick a lotyes no
48. I am often mean to other peopleyes no
49. My classmates in school think I have good ideasyes no
50. I am unhappyyes no
51. I have many friendsyes no
52. I am cheerfulyes no
53. I am dumb about most thingsyes no
54. I am good-lookingyes no
55. I have lots of pepyes no
56. I get into a lot of fightsyes no
57. I am popular with boysyes no
58. People pick on meyes no
59. My family is disappointed in meyes no
60. I have a pleasant faceyes no

61. When I try to make something, everything seems to go wrongyes no
62. I am picked on at homeyes no
63. I am a leader in games and sportsyes no
64. I am clumsyyes no
65. In games and sports, I watch instead of playyes no
66. I forget what I learnyes no
67. I am easy to get along withyes no
68. I lose my temper easilyyes no
69. I am popular with girlsyes no
70. I am a good readeryes no
71. I would rather work alone than with a groupyes no
72. I like my brother (sister)yes no
73. I have a good figureyes no
74. I am often afraidyes no
75. I am always dropping or breaking thingsyes no
76. I can be trustedyes no
77. I am different from other peopleyes no
78. I think bad thoughtsyes no
79. I cry easilyyes no
80. I am a good personyes no

Name: _____ School: _____

SOCIAL SUPPORT SCALE

Please read each statement carefully. Circle the number which describes how true each statement is for you.

	Always True	Often True	Seldom True	Never True
1. In the company of friends I can enjoy myself, relax and laugh.	1	2	3	4
2. My family shows an interest in what I have to say.	1	2	3	4
3. I have a friend who accepts me totally including both my worst and best points.	1	2	3	4
4. My family treats me fairly.	1	2	3	4
5. My family and I are not very open when it comes to discussing what we think about things.	1	2	3	4
6. There is someone who listens to me and understands how I feel.	1	2	3	4
7. There is no one I can rely on to help me in a crisis situation.	1	2	3	4
8. I have a friend who makes me feel special.	1	2	3	4
9. When I have problems, there is someone whom I can count on to give me useful suggestions or who says things to make my situation seem clearer and easier to understand.	1	2	3	4
10. I wish I were better understood by my family & friends.	1	2	3	4
11. When I need something there is seldom someone willing to loan or give it to me.	1	2	3	4

	Always True	Often True	Seldom True	Never True
12. My friends discuss their problems with me and ask for my advice.	1	2	3	4
13. My family doesn't care where I go or what I do.	1	2	3	4
14. I like to be alone, both at school and at home.	1	2	3	4
15. I feel better after discussing my problems with someone.	1	2	3	4
16. There is someone I can call on when I feel like doing something (going to a movie, playing a game).	1	2	3	4
17. My friends say things which hurt my feelings.	1	2	3	4
18. I do not feel as close to my family as other people seem to be to theirs.	1	2	3	4
19. I feel alone even among friends.	1	2	3	4
20. I know my friends will stick up for me when someone else is giving me a hard time.	1	2	3	4
21. There is someone who helps me when I am upset and have a problem.	1	2	3	4
22. I like to solve my problems by myself, rather than asking for advice from my family or friends.	1	2	3	4
23. People think I am fun to be with.	1	2	3	4
24. My family doesn't want to hear about my problems.	1	2	3	4
25. When I do a good job, there is someone there to tell me what a good job I did.	1	2	3	4

**SOCIAL SUPPORT SCALE
ITEM-TOTAL SCORE CORRELATIONS**

1. In the company of friends I can enjoy myself, relax and laugh.	.464
2. My family shows an interest in what I have to say.	.549
3. I have a friend who accepts me totally including both my worst and best points.	.584
4. My family treats me fairly.	.537
5. My family and I are not very open when it comes to discussing what we think about things.	.423
6. There is someone who listens to me and understands how I feel.	.671
7. There is no one I can rely on to help me in a crisis situation.	.580
8. I have a friend who makes me feel special.	.473
9. When I have problems, there is someone whom I can count on to give me useful suggestions or who says things to make my situation seem clearer and easier to understand.	.723
10. I wish I were better understood by my family & friends.	.635
11. When I need something there is seldom someone willing to loan or give it to me.	.442
12. My friends discuss their problems with me and ask for my advice.	.335
13. My family doesn't care where I go or what I do.	.389

Appendix L

164

14. I like to be alone, both at school and at home.	.466
15. I feel better after discussing my problems with someone.	.459
16. There is someone I can call on when I feel like doing something (going to a movie, playing a game).	.512
17. My friends say things which hurt my feelings.	.458
18. I do not feel as close to my family as other people seem to be to theirs.	.620
19. I feel alone even among friends.	.582
20. I know my friends will stick up for me when someone else is giving me a hard time.	.520
21. There is someone who helps me when I am upset and have a problem.	.662
22. I like to solve my problems by myself, rather than asking for advice from my family or friends.	.469
23. People think I am fun to be with.	.592
24. My family doesn't want to hear about my problems.	.432
25. When I do a good job, there is someone there to tell me what a good job I did.	.544

REVISED CLASS PLAY		HOSTILITY INVENTORY FOR CHILDREN									
SOCIALE	AGGRESS	WITHDRAW	HICASS	HICINDIR	HICIRR	HICNEG	HICRES	HICSUS	HICVER	HIC-OVERT	HIC-OVERT
SOCIALE	1.000										
AGGRESS	-0.2257*	1.000									
WITHDRAW	-0.5549**	-0.2634*	1.000								
HICASS	-0.1471	0.3258**	-0.253	1.000							
HICINDIR	-0.1061	0.09	0.021	0.5716**	1.000						
HICIRR	-0.0941	0.0656	0.0386	0.4463**	0.5875**	1.000					
HICNEG	-0.0833	0.2043	-0.0924	0.6973**	0.5842**	0.5196**	1.000				
HICRES	-0.2505*	-0.0145	0.3794**	0.3966**	0.4232**	0.5799**	0.427**	1.000			
HICSUS	-0.2413*	-0.1679	0.4415**	0.2874**	0.4057**	0.4823**	0.3001**	0.7536**	1.000		
HICVER	-0.065	0.1314	0.0645	0.6129**	0.5939**	0.5163**	0.5804**	0.5805**	0.464**	1.000	
HIC-OVERT	-0.1084	0.2458*	-0.0092	0.886**	0.7941**	0.6086**	0.848**	0.5482**	0.432**	0.820**	1.000
HIC-OVERT	-0.2271*	-0.0456	0.3348**	0.4387**	0.5525**	0.7844**	0.4776**	0.8148**	0.8811**	0.6054**	0.6136**
PHIEH	-0.131	0.1421	0.0644	0.4685**	0.3359**	0.3657**	0.3978**	0.3283**	0.2511*	0.2947**	0.4778**
PHINTEL	-0.2334*	-0.1038	0.3431**	0.3257**	0.3257**	0.3902**	0.2891**	0.4786**	0.488**	0.2399*	0.3253**
PHAPPEAR	-0.1695*	-0.2121	0.4314**	0.0688	0.2108	0.2627*	0.0827	0.3024**	0.3918**	0.135	0.1313
PHANX	-0.1687	-0.01872	0.4274**	0.0662	0.2803*	0.3282**	0.1783	0.477**	0.5642**	0.2976**	0.2493*
PHPOP	-0.4448**	-0.1697	0.6289**	0.1587	0.2768*	0.2603*	0.1822	0.442**	0.5356**	0.2685*	0.2550*
PHHAPPY	-0.1665	0.0001	0.2669*	0.1265	0.2413*	0.2649*	0.1604	0.3734**	0.3651**	0.1697	0.1971
PHTOTAL	-0.3051**	-0.1874	0.5288**	0.1316	0.3131**	0.3831**	0.209	0.5471**	0.5749**	0.2132	0.2528*
RCMAS	-0.2845*	-0.1227	0.41**	0.1628	0.287*	0.4179**	0.2173	0.5817**	0.582**	0.403**	0.3047**
CDI	-0.2327*	-0.128	0.412*	0.3023**	0.3567**	0.447**	0.2917**	0.5579**	0.5524**	0.2672*	0.3685**
SOCUP	-0.2251*	-0.1548	0.3827**	0.3386**	0.4316**	0.5012**	0.3626**	0.5612**	0.5796**	0.3468**	0.4270**
YSRDEPRES	-0.1289	-0.1582	0.3049**	0.1744	0.3761**	0.4783**	0.2801**	0.6521**	0.6133**	0.3502**	0.3336**
YSRAGGRES	0.0186	0.184	-0.1932	0.4993**	0.6114**	0.5852**	0.4986**	0.4322**	0.3475**	0.4861**	0.6215**
YSRDELIN	-0.0245	0.0982	-0.0658	0.5849**	0.5718**	0.5035**	0.5287**	0.468**	0.3301**	0.4312**	0.6389**
YSRINTER	-0.142	-0.1398	0.306	0.1843	0.3942**	0.4762**	0.3074**	0.6669**	0.6347**	0.3709**	0.3564**
YSRENTER	0	0.155	-0.1412	0.5726**	0.6359**	0.588**	0.5457**	0.508**	0.3884**	0.4928**	0.6688**
TRBEH	-0.2221	0.4467**	-0.0553	0.3109**	0.0945	-0.1898	0.3606**	0.1624	0.0772	0.1915	0.3019*
TRFIAPPY	-0.3279**	0.0098	0.495**	0.1254	0.0086	0.1315	0.2055	0.2854*	0.2849*	0.134	0.1579
TRFIACADEL	-0.3302**	0.1812	0.2726	0.159	-0.0122	0.0565	0.1956	0.1234	0.1015	0.0484	0.12
TRF WITH	-0.2866**	-0.1145	0.352**	0.0686	0.0948	0.118	0.0732	0.2322*	0.1611	0.1577	0.1212
TRFANX	-0.1696	-0.0732	0.2935**	-0.0479	0.0189	0.0095	-0.0815	0.162	0.1045	0.0479	-0.0039
TRFAGGRES	-0.1488	0.4247**	-0.1392	0.1821	0.0535	0.0392	0.0958	0.0229	-0.0844	0.1843	0.1662
TRFATTEND	-0.3427**	0.3191**	0.2178*	0.3300**	0.1156	0.1165	0.2508*	0.1789	0.0534	0.2501*	0.3016**
TRFENTER	-0.2541*	-0.902	0.3624**	0.0316	0.0707	0.0794	0.0119	0.228*	0.1509	0.1288	0.0841
TRFEXTER	-0.215*	0.3655**	-0.316	0.1804	0.0624	0.0551	0.1114	0.059	-0.055	0.1896	0.175

**p<.001 *p<.01

	PIERS-HARRIS CHILDRENS SELF-CONCEPT SCALE				RCMAS		CDI		SOCIAL SUPPORT	
	PHEBH	PHINTEL	PHAPPEAR	PHANX	PHPOP	PHHAPPY	PHTOTAL			
SOCIAL										
AGGRESS										
WITHDRAW										
HICASS										
HICINDIR										
HICIRR										
HICNEG										
HICRES										
HICUSUS										
HICVER										
HIC-OVERT										
HIC-OVERT										
PHEBH	1.000									
PHINTEL	0.517**	1.000								
PHAPPEAR	0.2369*	0.5863**	1.000							
PHANX	0.256*	0.6568**	0.6333**	1.000						
PHPOP	0.1726	0.6099**	0.7623**	0.6822**	1.000					
PHHAPPY	0.3723**	0.557**	0.618**	0.6674**	0.4907**	1.000				
PHTOTAL	.5325**	.8079**	.7015**	.7534**	.7179**	.6689**	1.000			
RCMAS	0.3007**	0.594**	0.4977**	0.707**	0.5596**	0.4016**	.6759**	1.000		
CDI	0.4951**	0.6811**	0.5105**	0.6999**	0.5377**	0.6764**	.7864**	0.6323**	1.000	
SOCUP	0.3965**	0.5693**	0.4717**	0.5838**	0.5448**	0.4709**	.5895**	0.6058**	0.6556**	1.000
YSRDERES	0.2576*	0.5697**	0.4111**	0.6836**	0.4457**	0.585**	.6375**	0.6974**	0.7302**	0.5853**
YSRAGGRES	0.3741**	0.3126**	0.1051	0.2176*	0.0788	0.3073**	.2592*	0.2497*	0.3081**	0.289**
YSRDELIN	0.643**	0.4548**	0.1387	0.3126**	0.147	0.4242**	.4151**	0.3112**	0.5261**	0.3684**
YSRINTER	0.2619*	0.5674**	0.4031**	0.6867**	0.4522**	0.5859**	.6413**	0.6786**	0.7302**	0.5614**
YSRDEXTER	0.5335**	0.3842**	0.1228	0.2746*	0.1232	0.3921**	.3552**	0.2823*	0.4344**	0.3536**
TRFBEH	0.3676**	0.1928	-0.2085	0.0086	-0.0676	0.1079	0.0546	0.0282	0.0753	0.0738
TRFHAPPY	0.2524*	0.4681**	0.3856**	0.3984**	0.4377**	0.3216**	.4617**	0.3097*	0.3988**	0.4018**
TRFACADEMIC	0.203	0.376**	0.1178	0.1928	0.2329	0.1493	.2691*	0.1574	0.2451*	0.1908
TRF WITH	0.05	0.2277*	0.1285	0.2469*	0.2911**	0.0886	.2493*	0.1716	0.2346*	0.2786*
TRFANX	-0.0556	0.0958	0.0505	0.2453*	0.1951	0.0882	0.1506	0.0859	0.1489	0.1335
TRFAGGRES	0.0766	-0.0388	-0.2065	-0.0277	-0.0868	0.0181	-0.1057	-0.0804	-0.036	-0.0408
TRFATTEND	.3278**	.2500*	-0.0125	0.0784	0.1196	0.0597	0.1805	0.0711	0.1809	0.2006
TRFINTER	0.0056	0.1946	0.1195	0.2869*	0.2892*	0.1118	.2347*	0.1484	0.2171*	0.2244
TRFEXTER	0.1193	0.0393	-0.1539	0.0333	-0.009	0.0299	-0.0186	-0.0479	0.0104	0.0405

**p<.001 *p<.01

Appendix M PEARSON PRODUCT MOMENT CORRELATIONS

	YOUTH SELF-REPORT SCALE				TEACHERS REPORT FORM							
	YSRDEPRES	YSRAGGRES	YSRDELM	YSRINTER	YSREXTER	TRBEBH	TRFHAPPY	TRFACADEL	TRFWITH	TRFANX	TRFAGGRES	TRFATTEND
SOCIALE												
AGGRES												
WITHDRAW												
HICASS												
HICINDIR												
HICIRIR												
HICNEG												
HICRES												
HICSLUS												
HICVER												
HICOVERT												
HICOVERT												
PHBEBH												
PHBNTL												
PHAPPEAR												
PHANX												
PHROP												
PHHAPPY												
PHTOTAL												
RCMAAS												
CDI												
SOCSLUP												
YSRDEPRES	1.000											
YSRAGGRES	0.447**	1.000										
YSRDELM	0.4081**	0.6965**	1.000									
YSRINTER	0.9765**	0.4944**	0.4467**	1.000								
YSREXTER	0.4695**	0.9169**	0.9076**	0.5206**	1.000							
TRBEBH	-0.0848	0.3288**	0.3056**	0.1064	0.3281**	1.000						
TRFHAPPY	0.3712**	0.0693	0.1427	0.3683**	0.085	0.409**	1.000					
TRFACADEM	0.1384	0.0366	0.1595	0.1636	0.076	0.4179**	0.5165**	1.000				
TRFWITH	0.1866	-0.0708	0.0792	0.1746	-0.0351	-0.1242	0.1858	-0.1532	1.000			
TRFANX	0.1629	-0.0567	-0.0115	0.1626	-0.0468	-0.1745	0.0513	-0.2439*	0.7882**	1.000		
TRFAGGRES	0.0273	0.1385	0.157	0.0213	0.1671	0.231*	-0.1188	-0.2352*	0.5021**	0.5134**	1.000	
TRFATTEND	0.1265	-0.01	0.1403	0.1016	0.0679	.4974**	.4205**	.5715**	.4769**	.2164*	.5006**	1.000
TRFINTER	0.2001	-0.0534	0.0519	0.1957	-0.0327	-0.1245	0.171	-0.172	0.9383**	0.9382**	.3866**	1.000
TRFEXTER	0.0408	0.0685	0.1471	0.0307	0.1138	0.2647*	-0.0036	-0.1206	0.6205**	0.56**	0.958**	.7368**

**p<.001 *p<.01

February, 1989

Dear Parents/Guardians,

I am writing to ask permission for your child to take part in a research project on children's social relationships. This project has received the approval of the Ethics Committee at Carleton University and the Research Committee of the Carleton Board of Education has granted me permission to request your cooperation in this study.

The research consists of two phases. In the first phase children in grade seven who have parental permission to participate will be group administered a questionnaire which asks children to nominate classmates for different roles in an imaginary class play. This instrument requires 10 to 15 minutes of class time to administer. Student names will be coded to maintain anonymity.

From the sample of grade 7 students, a smaller number of students will be selected for more intensive study. The focus in this phase of the research is on how children's feelings and behavior are related to how they get along with their peers. Children will be asked to complete a number of self-report questionnaires assessing mental health. These include measures of depression, anxiety, hostility, and self-esteem. Children will also be asked to report on the social support they receive from family and friends. Parents who are interested in viewing the self-report measures can make arrangements with the researcher to do so.

Questionnaires will be administered in small groups during the regular school day and children will be instructed to leave out any questions which they feel uncomfortable answering. In addition to the self-report questionnaires filled out by the children, teacher ratings of behavior will be obtained.

I hope that you will agree to let your child participate as this research has important implications for education. Children who have social problems also often have concomitant school problems. Even if you do not agree to your child's participation, would you please return the parental consent form to the school to indicate that you have read and understand the nature of the request. Thank you for your cooperation in this matter. Comments or inquires regarding any aspect of this research are welcomed.

Yours truly,

Beverley Vargo, M. A.
829-9137 (W)
489-2039 (H)

LETTER OF CONSENT

I have read and understand the request for permission for my child to participate in the research project conducted by Beverley Vargo of Carleton University on children's social relationships. I understand that my child's participation is voluntary and that he/she may withdraw from the study at any time. I further understand that all data collected is confidential and only group data will be used in published reports of the study's findings.

____I give permission for my child to participate

____I do not give permission for my child to participate

Name of Child: _____ Sex: ____boy____girl
Please Print

Signature of Parent/Guardian: _____

School: _____ Class: _____ Teacher: _____

Date: _____

CARLETON UNIVERSITY
Department of Psychology
Loeb Building

Dear Parents,

Last week I distributed, through your child's school, letters to parents requesting consent for their children to participate in a research project on children's social relationships. At the time of writing your child has not brought in his/her form. I am enclosing another Letter of Consent which I would ask you to complete and return to your child's school. To acknowledge receipt of this letter please complete the form even if you do not wish your child to take part. Thank you very much.

Sincerely,

Beverley Vargo, M. A.

LETTER OF CONSENT

- ☐ I give permission for my child to participate
- ☐ I do not give permission for my child to participate

in the research on children's social relationships which is being conducted by Beverley Vargo of Carleton University. I understand that participation is voluntary and that I may withdraw my child from the study at any time.

Name of Child: _____ Sex: ____boy____girl
Please Print

Signature of Parent/Guardian: _____

School: _____ Class: _____ Teacher: _____

Date: _____

INSTRUCTIONS TO STUDENTS

Phase 1

My name is _____ I am a researcher from Carleton University and I am studying social relationships in grade 7 students. I will be handing out a class list and a two page questionnaire which asks you to nominate children in this class for roles in an imaginary class play. The questionnaire will only take about 15 minutes to complete. There are some of you who will not be filling out these forms today; you can take some work out of your desk and work quietly for the next ten minutes. I will read the names of the pupils who will be taking part in the research.

Before we begin I want you to know that this is not a test; there are no right or wrong answers. Secondly, the answers you give to the questions are confidential; you are asked not to discuss them with anyone.

Hand out class rosters and Revised Class Play.

Please look at the class list; you will see that after every name there is a number code. These codes are to be used when filling out the questionnaire. On the second set of papers you received, entitled "Revised Class Play", you will see that there are thirty items which describe typical kids in a grade 7 class. Read each item and choose the **one** person in the classroom who best fits each description. Enter the code number for that person in the blank space after the question. If there are more than one person who fits the description, record their class codes as well. You can choose up to three people for each item. You can choose the same person for as many of the descriptions of behavior as you wish. However you are not to choose yourself for any of the items. If there is no one who fits the description, then leave the item blank. Are there any questions? When

you have finished turn over your paper and I will collect it. All right; begin.

Thank you so much for your cooperation today. I will be back in the schools early in the new year to study a small group of students more intensively. At that time I will be asking questions about how you feel about yourselves and about problems you may be experiencing.

Phase 2

This morning and tomorrow morning I am here to administer the questionnaires which I talked to you about last November regarding how you feel and about problems you may be experiencing. As before, I want to make it clear that your answers are confidential and that this is not a test. Everyone is an individual so you put down what is right for you. There are 3 questionnaires today and 3 tomorrow. Each will take about 15 minutes to complete. Each questionnaire has a set of directions at the top and an example of how to mark your answers. Please read all directions before you begin. You do not have to answer any questions which make you feel uncomfortable. When you have finished, turn over your booklets and I will come around the room and collect them. Please put your name and school at the top of each page right now. Are there any questions? If not you may begin and continue at your own pace. I will be available to answer any questions - just raise your hand. Thank you for your cooperation.

Dear Teachers,

I am conducting a research project on the social relationships of grade 7 students for my doctoral thesis at Carleton University. This project has received the approval of the Ethics Committee at Carleton University and the Research Committee of the Carleton Board of Education has granted me permission to request your cooperation in this study.

This research consists of two phases. In the first phase children in your classroom whose parents have given written consent will be asked to complete a 15 minute questionnaire on children's social relationships. (Note: Due to the sociometric nature of the research, only those classrooms in which two-thirds of the parent consent forms have been returned, will participate in the research). The questionnaire consists of a number of behavioral descriptions of students, and the children are asked to nominate the person in the class who best fits each description. The questionnaire will be group administered by research personnel.

In the second phase of the research a small number of children (approximately 3 or 4 per classroom) will be studied more intensively. Questionnaires will be administered which ask the child about feelings of anxiety, depression, hostility, self-confidence, and about a variety of behavior problems. In addition children will be asked to report on their social networks. Administration of these instruments will be in two forty-five minute sessions. You, as the classroom teacher, will be asked to complete a behavior rating scale for one or two children in your class. Each checklist takes about twenty minutes to complete.

I hope that you will support this research as it has important implications for education. Children who have social problems also often have concomitant school problems. Thank you for your cooperation. Inquires or comments regarding any aspect of this research are welcomed.

Yours truly,

Beverley Vargo, M. A.

**RESULTS OF MEDIAN SPLIT ON SELF-ESTEEM MEASURE:
FORMATION OF SELF-ESTEEM SUBGROUPS**

<u>Social Group</u>	<u>High Self-Esteem</u>	<u>Low Self-Esteem</u>	<u>Total</u>
Sociable	21	12	33
Aggressive	19	9	28
Withdrawn	9	24	33
Average	13	17	30

<u>Chi-Square</u>	<u>Degrees of Freedom</u>	<u>Significance</u>
13.377	3	.004

Appendix R

**RESULTS OF MEDIAN SPLIT ON SOCIAL SUPPORT SCALE:
FORMATION OF SOCIAL SUPPORT GROUPS**

<u>Social Group</u>	<u>High Social Support</u>	<u>Low Social Support</u>	<u>Total</u>
Sociable	21	13	34
Aggressive	21	8	29
Withdrawn	8	25	33
Average	15	16	31

<u>Chi-Square</u>	<u>Degrees of Freedom</u>	<u>Significance</u>
16.438	3	.001

Results of Factorial Manovas for Self-Esteem Groups**Overt, Covert Hostility**

<u>Effect</u>	<u>D. F.</u>	<u>F Value (Pillais)</u>	<u>Sig. of F</u>
Constant	2,100	1016.99	.000
Social Group	6,202	5.11	.000
Self-esteem Group	2,100	5.48	.006
Social Group by Self-esteem Group	6, 202	1.64	.138

Children's Depression Inventory

<u>Effect</u>	<u>D. F.</u>	<u>F Value</u>	<u>Sig. of F</u>
Constant	1,104	308.26	.000
Social Group	3,104	2.10	.104
Self-esteem Group	1,104	16.84	.000
Social Group by Self-esteem Group	3,104	1.14	.337

Revised Children's Manifest Anxiety Scale

<u>Effect</u>	<u>D. F.</u>	<u>F Value</u>	<u>Sig. of F</u>
Constant	1,104	308.26	.000
Social Group	3,104	2.10	.104
Self-esteem Group	1,104	16.84	.000
Social Group by Self-esteem Group	3,104	1.14	.337

YSR Internalizing, YSR Externalizing

176

<u>Effect</u>	<u>D. F.</u>	<u>F Value</u>	<u>Sig. of F</u>
Constant	2,107	.18	.84
Social Group	6,216	3.91	.001
Self-esteem Group	2,107	10.6	.000
Social Group by Self-esteem Group	6,216	1.12	.354

TRF Internalizing, TRF Externalizing

<u>Effect</u>	<u>D. F.</u>	<u>F Value</u>	<u>Sig. of F</u>
Constant	2,106	.34	.711
Social Group	6,214	5.8	.000
Self-esteem Group	2,106	1.73	.183
Social Group by Self-esteem Group	6,214	1.11	.355

Results of Factorial Manovas for Social Support Groups

Overt, Covert Hostility

<u>Effect</u>	<u>D. F.</u>	<u>F Value (Pillais)</u>	<u>Sig. of F</u>
Constant	2,101	1128.37	.000
Social Group	6,204	4.36	.000
Social Support Group	2,101	13.802	.000
Social Group by Social Support Group	6, 204	.67	.678

Children's Depression Inventory

<u>Effect</u>	<u>D. F.</u>	<u>F Value</u>	<u>Sig. of F</u>
Constant	1,116	124.11	.000
Social Group	3,116	1.35	.261
Social Support Group	1,116	13.82	.000
Social Group by Social Support Group	3,116	.91	.438

Revised Children's Manifest Anxiety Scale

<u>Effect</u>	<u>D. F.</u>	<u>F Value</u>	<u>Sig. of F</u>
Constant	1,105	287.03	.000
Social Group	3,105	.83	.482
Social Support Group	1,105	19.19	.000
Social Group by Social Support Group	3,105	.89	.448

YSR Internalizing, YSR Externalizing

<u>Effect</u>	<u>D. F.</u>	<u>F Value (Pillais)</u>	<u>Sig. of F</u>
Constant	2,110	.086	.918
Social Group	6,222	3.32	.004
Social Support Group	2,110	10.36	.000
Social Group by Social Support Group	6,222	.616	.718

TRF Internalizing, TRF Externalizing

<u>Effect</u>	<u>D. F.</u>	<u>F Value (Pillais)</u>	<u>Sig. of F</u>
Constant	2,109	.24	.784
Social Group	6,220	8.72	.000
Social Support Group	2,109	2.35	.101
Social Group by Social Support Group	6,220	1.48	.184