Self-Schemas and Behavioural Adjustment of Socially Withdrawn Children

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Dedicated to my husband Rob:

for your love and patience.

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ABSTRACT

Evidence from research and clinical work supports the notion that social relationships play a crucial role in many areas of psychological development. Social withdrawal constitutes a form of social maladjustment in childhood, and consequently, may have important implications for short-term and long-term prognoses. A recent longitudinal study points to the possibility that these children are at risk for internalizing disorders, such as anxiety and depression. Yet it is unclear which psychological variables account for the possible relationship between social withdrawal and internalizing disorders. Numerous theorists and investigators have shown that cognitive factors may be central to the development of psychopathology. The present study hypothesizes that maladaptive information processing and internalizing problems may be associated with social withdrawal. A multi-group comparison therefore examined children's self-schemas, as measured by self-perceptions and recall of positive and negative descriptors, and evaluated their behavioural/emotional functioning. The complete sample consisted of 132 sixth and seventh grade children recruited from five elementary schools in the Ottawa-Carleton region. After being identified by peer nominations in Phase 1, a between-group design was utilized in Phase 2 to compare 40 withdrawn children, 51 average children, and 41 aggressive children.

Multivariate analysis of variance was conducted to assess group differences in current status with regard to self-perceptions, recall memory of

descriptors, and behavioural adjustment. As predicted, socially withdrawn children had less positive self-perceptions, more negative self-perceptions, and significantly higher internalizing scores than did average and aggressive children. No significant differences emerged, however, with respect to the recall of positive and negative descriptors. Implications of the present findings and directions for future research are discussed.

SELF-SCHEMAS AND BEHAVIOURAL ADJUSTMENT OF SOCIALLY WITHDRAWN CHILDREN:

INTRODUCTION

From both theoretical and practical perspectives, social withdrawal represents an important area of study because of its impact on children's psychological and social development. Notably, social withdrawal is a subtype of the internalizing dimension of child psychopathology. The internalizing disorders include social withdrawal (e.g., shyness, inhibition, social isolation), as well as feelings of fear, sadness, hypersensitivity, or self-consciousness (Achenbach & Edelbrock, 1978; Quay & Werry, 1986). Further, social withdrawal is a diagnostic criterion for at least two DSM-IV clinical categories of childhood psychological disturbance: avoidant disorder and adjustment disorder with withdrawal (American Psychiatric Association, 1994). With respect to social maladjustment in childhood, withdrawal is one of the two behaviour patterns that most frequentiy characterizes dysfunctional peer relationships. Withdrawal is second oniy to aggression in terms of frequency and severity (Quay & Werry, 1986). Yet much more research has been devoted to aggression than to social withdrawal.

Researchers have defined and measured childhood social withdrawal in various ways. Additionally, social withdrawal has been variously labelled social isolation (Gottman, 1977; Wanlass & Prinz, 1982), shyness (Buss, 1986;

Engfer, 1993), behavioural inhibition (Asendorpf, 1991; Kagan et al., 1984), peer rejection (Strain & Kerr, 1981), and sociometric neglect (Coie & Kupersmidt, 1983; Dodge, 1983; Honig, 1987). Criteria for selecting socially withdrawn children reflect this diversity and have included (a) overall frequency of interaction with peers (e.g., rate of social interaction below the norm for their age group), (b) quality of social interaction (e.g., initiating and receiving fewer positive interactions, responding less frequently to peers' initiations, low rate of positive response, and verbalizing less frequently), and (c) sociometric status (e.g., neglected, rejected). Overall, socially withdrawn individuals exhibit multiple characteristics and problems, including low rate of social interaction, poor social skills, and exclusion by peers.

Because researchers have used different operational definitions of social withdrawal, they have not reached a consensus on its conceptual definition. Nevertheless, some commonalities are evident across studies in terms of characteristic behaviours exhibited by socially withdrawn children: they interact infrequently with their peers; frequently engage in solitary activities; talk less often to peers than socially average children; initiate social interaction with peers less often than average children; respond to peer initiations less often; and manifest poor relations with peers. Given the heterogeneous nature of social withdrawal and disagreement about a standard definition, no clear statistics on prevalence and incidence exist. In studies of socially withdrawn

children, the incidence rates have varied from 5% to 25% (Hops & Greenwood, 1981).

Theorists have speculated as to why social withdrawal might interfere with normal development. According to Piaget (1932) and Sullivan (1953), both the quality and quantity of social interaction promote opportunities for cooperation, negotiation, conflict, and mutuality between children, all of which are important for the development of healthy interpersonal relationships. As well, Hartup (1983) asserts that peer interaction plays an important role in children's social, cognitive, behavioural, and emotional development. Consequently, children who interact with their peers a less-than-average amount, or who display withdrawn behaviours, might show deficits in these areas of development.

In spite of its relevance to development, relatively little data exist with respect to the link between childhood social withdrawal and other psychological problems and later maladjustment. More research is needed, therefore, in order to establish the correlates and outcomes of social withdrawal. For example, some critical gaps in empirical knowledge remain concerning the cognitive, intrapersonal, and interpersonal functioning of socially withdrawn children. Despite the dearth of information regarding social withdrawal, there are numerous clinical interventions aimed at these children. It is essential that research be pursued in order to inform clinical work in this area.

The above theoretical, research, and clinical issues necessitate the study of social withdrawal. The following discussion will examine the empirical findings concerning the correlates, early outcome, and recent risk status of social withdrawal in childhood. This literature will be evaluated for conceptual and methodological problems. Then, cognitive models of information processing and schemas will be used as conceptual frameworks for understanding and testing the relation between social withdrawal and psychological adjustment.

Correlates and Outcomes of Childhood Social Withdrawal

Previous investigations of the correlates of social withdrawal have focused on socially isolated children enrolled in preschool, kindergarten, or early elementary grades. The bulk of studies in this area have been conducted by Rubin in the Waterloo Longitudinal Project which began in 1980. Assessment methods for social withdrawal fall into three categories: behavioural observation; peer evaluation; and non-peer informant instruments based on teacher, parent, or self-reports. Mainly, Rubin has identified socially withdrawn children using behavioural observation.

Defining withdrawal in terms of frequency of social interaction, Rubin (1982) investigated several social-cognitive correlates of isolation among 34 preschool and kindergarten children. Rubin used a variety of assessment

methods including videotapes of free-play, Peabody Picture Vocabulary Test, and an interpersonal problem-solving test. Relative to socially average children, results showed that isolated children engaged in fewer social games and less dramatic play, had less advanced intellectual ability, and were more likely to suggest seeking the help of an adult when faced with social difficulty. No differences were found, however, between isolates and their more sociable peers on a perspective-taking task. In addition, Rubin (1982) videotaped and coded the spontaneous utterances of 15 preschool children (5 isolate, 5 average, 5 sociable) and found that isolated preschoolers were significantly less apt to address other children.

In further observational studies Rubin and colleagues found that social withdrawal in kindergarten and Grade 2 children was concurrently associated with indices of anxiety or fearfulness (Rubin & Clark, 1983; Rubin, Moller, & Emptage, 1987), submissiveness in the peer group (Rubin & Borwick, 1984), and the inability to manage interpersonal dilemmas successfully. Rubin and Krasnor (1986) found that first grade isolates were more likely to suggest using nonassertive strategies to initiate friendships than were average children and highly sociable children. In summary, socially withdrawn children appeared less socially and cognitively competent compared to more sociable children.

Rubin (1985) examined the sociometric status, interpersonal cognitive problem-solving skills, and perceived self-competence of 19 children who were

consistently targeted as isolated over a 3-year period from kindergarten to Grade 2. The withdrawn children were identified on the basis of below average rates of peer interaction and were compared to 14 average children and 10 sociable children. Results indicated that second grade isolates did not deviate from age-group norms with respect to social problem-solving skills or sociometric status. However, using Harter's (1982) Perceived Competence Scale, second grade isolates scored significantly lower in social, cognitive, and general self-competency than did sociable children. This finding suggests that children who interact with others at a low rate relative to their peers may view themselves as less competent in several areas.

When behavioural observation is utilized to select subjects, young socially withdrawn children seem to have less developed social and cognitive skills than socially average children. Moreover, the latter study by Rubin (1985) suggests that they are accurate in perceiving themselves as less competent. They are relatively less assertive, more dependent, and have fewer problem solving strategies. They may also experience more fear and anxiety than their sociable age-mates. Given that social withdrawal in childhood is moderately stable (Hymel, Rubin, Rowden, & LeMare, 1990; Moskowitz, Schwartzman, & Ledingham, 1985) and that it is associated with social cognitive difficulties, one might assume that social withdrawal would lead to negative outcomes.

Although social withdrawal appears to be fairly stable and has

implications for psychological development, very few studies have been conducted regarding the outcomes of childhood social withdrawal. As criterion variables, future adjustment ratings and diagnosis of schizophrenia have typically been used. Some studies have shown evidence for a relationship between social withdrawal in childhood and later maladjustment (Havighurst, Bowman, Liddle, Matthews, & Pierce, 1962; Janes & Hesselbrock, 1978), whereas others have not (Michael, Morris, & Soroker, 1957; Morris, Soroker, & Burruss, 1954; Robins, 1966).

To some degree, early negative findings discouraged investigators from studying long-term outcomes for socially withdrawn children. However, some researchers have looked at different outcomes and found evidence to support the hypothesis that withdrawn children were at-risk. For example, Havighurst, Bowman, Liddle, Matthews, and Pierce (1962) measured the academic adjustment of 19 withdrawn males and 30 withdrawn females aged 11 years. Withdrawal was rated by teachers and included shy, fearful, and seclusive behaviours. Withdrawn subjects had significantly higher rates of school failure and drop-out by eleventh grade compared to the total group, as well as poor academic performance among more than half of those who remained in school. Thus, teacher ratings of withdrawal in preadolescent children were related to poor academic achievement several years later.

In another follow-up study, Janes and Hesselbrock (1978) compared

teacher ratings of 187 clinic-referred children aged 4 to 15 years to ratings of social adjustment determined by interviews 9 to 15 years later. Clinic-referred females who withdrew from other children and who had temper displays were rated as being more poorly adjusted at follow-up than other girls.

Thus, whereas some studies do not provide support for a relation between early withdrawal and future maladjustment, schizophrenia, or antisocial behaviour (Michael et al., 1957; Morris et al., 1954; Robins, 1966), other studies do provide support for the contention that socially withdrawn children represent an at-risk group (Havighurst et al., 1962; Janes & Hesselbrock, 1978). Specifically, socially withdrawn children appear to experience adjustment problems, academic underachievement, and educational failure in adolescence or adulthood. Findings are nevertheless inconsistent regarding the relationship between social withdrawal in childhood and negative outcomes. An examination of the following methodological and conceptual problems partially explains these discrepant results.

Methodological and conceptual problems. Numerous methodological and conceptual problems apparent in the above outcome studies relate to diagnostic and measurement practices, sample constitution, research design, and choice of outcome criteria. These differences in subject characteristics, assessment methods, and research design among studies make drawing comparisons and reaching conclusions difficult. As part of its objectives, therefore, the present

study will address these problematic issues.

Firstly, with regard to identifying socially withdrawn subjects, retrospective diagnoses of social withdrawal used in some studies have questionable reliability and validity. Clinical and anecdotal data were often used instead of standardized instruments, thereby casting doubt on the objectivity of the findings. Further, using clinical records completed more than 20 years ago presents a problem because identical behavioural descriptors may have had slightly different meanings to people completing the records then, and implicit norms for appropriate child behaviours may have also changed over time. Given this ambiguity in symptom descriptors and subjective data, analyses of clinic case files allows enormous latitude in coding and interpretation, which compounds the original lack of reliability of the diagnoses.

Secondly, the measurement methods employed with socially withdrawn children have generally been poor. Standardized, psychometrically sound, and objective measures of adjustment were seldom used. In particular, the psychometric properties of the interview methods, self-report questionnaires, and teacher ratings are suspect. Unstructured clinical interviews are replete with problems of reliability and validity, and for teacher assessments, school records of teachers' anecdotal comments were utilized instead of reliable and valid rating scales (Parker & Asher, 1987).

Thirdly, the foremost methodological problem that plagued the literature

pertains to the populations studied. As Parker and Asher (1987) have noted, clinic and high-risk samples have mainly been studied, which tends to result in a restricted range of observed behaviour and an underestimate of any predictive correlation. In addition, these samples may not be representative of the total population of socially withdrawn children due to the fact that children demonstrating more acute mental health problems are more likely to be referred for treatment. Another disadvantage of studying clinic-referred children is that the labelling effects of perceived deviance may colour the accounts given by parents, teachers, and clinicians. As a result, sampling biases associated with clinic populations of withdrawn children restrict the generalizability of the findings.

Fourthly, most of these outcome studies did not use control or comparison groups. Without provision of representative samples and appropriate controls, definite conclusions regarding the precise psychological effect of social withdrawal cannot be drawn. Another problem may be the potential for selection and recall biases. These biases can arise when subjects are not periodically monitored. Insufficient monitoring increases the probability that intervening variables may be responsible for the outcomes, and renders the findings less meaningful.

Lastly, perhaps a major reason why no consistent long-term consequences of withdrawal have been found is that investigators have

frequently employed externalizing disorders and psychosis as the outcome (criterion) variables. As Rubin, Hymel, and Mills (1989) have pointed out, it does not make intuitive sense that socially withdrawn or isolated children would become delinquent, antisocial, or aggressive later in life. Conceptually, it seems more appropriate to study risk for internalizing disorders (e.g., depression, anxiety).

The research findings regarding the relationship between social withdrawal in childhood and concurrent or short-term outcomes clearly show that these children experience psychological and adjustment problems. In view of the methodological problems and conceptual limitations of early outcome studies, firm conclusions regarding the long-term effects of social withdrawal cannot be made at this point. However, recent theorizing suggests that internalizing problems (e.g., depression) may be more plausible outcomes of social withdrawal than the externalizing outcomes (e.g., schizophrenia) that were the focus of earlier studies. Indeed, recent empirical research has explored this notion.

Social Withdrawal and Internalizing Problems

For some time theorists have suggested that social withdrawal may be viewed as increasingly abnormal, and therefore detrimental, in later childhood. Piaget (1926) and Sullivan (1953) argued that peer interaction has its greatest

impact on social-cognitive and personality development during the middle and later years of childhood. Observational studies have shown that during early childhood solitary or non-social activity is quite normal (Rubin & Clark, 1983), but that children become increasingly social with age. Thus, it is conceivable that withdrawal in middle or late childhood might indicate psychosocial adjustment problems.

As mentioned, Rubin has argued that the more probable maladaptive outcomes for withdrawn children may be of an internalizing nature, such as depression and social anxiety (Rubin & Lollis, 1988). There is some empirical support for this hypothesis. Strauss, Forehand, Smith, and Frame (1986) found that socially withdrawn children had lower self-concepts, higher levels of depression and anxiety, and were less well liked by peers, compared to sociable children. Moreover, in several recent studies Rubin and his colleagues (Hymel, Rubin, Rowden, & LeMare, 1990; Rubin, Chen, & Hymel, 1993; Rubin, Hymel, & Mills, 1989; Rubin & Mills, 1988) used a longitudinal design to follow a large sample of kindergarten students to Grade 5 and to examine whether socially withdrawn children were at risk for internalizing problems. The preliminary evidence from this longitudinal study suggests that they are.

With a sample composed of second-, fourth-, and fifth-grade children, Rubin and Mills (1988) assessed social withdrawal by behavioural observations during free play and by peer nominations using the Revised Class Play. The

authors noted that the withdrawal scale on the Revised Class Play confounds two aspects of isolation – "passive withdrawal" from the peer group and "active isolation" by the peer group. Active isolation refers to isolation that is a consequence of being rejected by the peer group. Such isolation may be associated with immature and rambunctious play. By contrast, passive withdrawal refers to withdrawal that is inherent. Passively withdrawn children tend to isolate themselves and display passive behaviour (solitary constructive or sedentary play) as well as sensitivity. Younger and Daniels (1992) also recognized the heterogeneity of the social withdrawal construct and confirmed the distinction between these two subtypes of social withdrawal. The authors interviewed 88 children in Grades 1, 3, and 5 and asked their reasons for choosing peers for withdrawal items on the Revised Class Play. The results supported the classification of the Revised Class Play items into two categories or scales labelled passive withdrawal and active isolation. Therefore, children who are withdrawn due to shyness and hypersensitivity (passive withdrawal), for example, may be very different from those who are isolated due to peer rejection (active isolation).

Rubin and Mills (1988) also examined the stability and the concurrent and predictive correlates of social withdrawal. The results showed that observed and peer-assessed passive withdrawal was moderately stable across the three grades, whereas active isolation was unstable across these grades.

Passive withdrawal was consistently related to internalizing difficulties and negative social self-perceptions. In Grades 4 and 5, peer-assessed passive withdrawal was related to teacher ratings of internalizing problems and, in Grade 5, associated with loneliness and depression. Observed passive withdrawal was also negatively related to perceived social competence in Grade 4. In summary, passively withdrawn children continued to be withdrawn over a three-year period, and were likely to perceive themselves as less socially competent than other children, as well as experience feelings of loneliness and depression.

Finally, whereas indices of passive withdrawal in second grade predicted depression and loneliness in fifth grade, active isolation did not predict subsequent problems in Grade 5. In Grade 4 active isolation was associated with teacher ratings of externalizing difficulties. Rubin suggests that passive withdrawal and active isolation differ in terms of concurrent correlates and predictive utility, such that the former predicts internalizing problems, whereas the latter does not.

In the second report, Rubin, Hymel, and Mills (1989) investigated the correlates of social withdrawal and sociability. As before, withdrawal was defined on the basis of behavioural observations and peer nominations. Again, the authors made a distinction between active isolation and passive withdrawal. To assess internalizing problems, self-reports of social competence, overall

self-worth, loneliness, and depression, as well as teacher ratings of shy/anxious behaviour were collected. Observed passive withdrawal in kindergarten predicted Grade 5 teacher ratings of anxiety, negative self-evaluations of social competence, loneliness, and depressive feelings. Further, observed passive withdrawal in Grade 2 predicted low perceived social competence and loneliness in Grade 4 and depression in Grade 5. Peer assessments of passive withdrawal in Grade 2 were also found to predict internalizing problems in later grades. Specifically, compared to other children, passive withdrawn children viewed themselves as less socially competent in Grades 4 and 5 and felt lonely and depressed in Grade 5.

In another report of their longitudinal study, Hymel, Rubin, Rowden, and LeMare (1990) studied the predictive correlations between social withdrawal in early childhood (Grade 2) and subsequent internalizing and externalizing problems in middle childhood (Grade 5). A sample of 87 children was assessed using peer-rating and observational measures of social withdrawal. Grade 2 indices of social withdrawal were significantly related to low peer acceptance (popularity) and negative self-perceptions of social competence in both Grades 2 and 5. More recently, Grade 5 withdrawn children were rated by classmates as less popular than average children, rated by teachers as less assertive, and rated by self as less physically competent (Rubin, Chen, & Hymel, 1993). Thus, early indices of social withdrawal predicted internalizing

problems and lower peer acceptance three years later.

Rubin, Hymel, and Chen (1993) compared the socio-emotional characteristics of extremely withdrawn, average, and extremely aggressive fifth-grade children. Withdrawn children were classified using only the cluster of Revised Class Play items that reflect passive withdrawal. The sample consisted of 9 highly withdrawn, 10 highly aggressive, and 111 average children. The withdrawn group reported themselves to be less socially competent, more lonely, and more depressed than the average group. In addition, withdrawn children were less popular and were rated by teachers as having more learning problems and being less assertive than the average children. Given the extreme group targeting procedure and small sample size, however, generalizability to the majority of withdrawn children may be limited. Nevertheless, these data support the suggestion that social withdrawal may reflect psychological problems of an internalizing nature.

This recent work by Rubin and his colleagues represents an initial step toward examining internalizing outcomes of childhood social withdrawal. It seems that observations and peer assessments of passive withdrawal in early childhood may be related to, and predictive of, internalizing difficulties in later childhood. Thus, Rubin's studies indicate that early social withdrawal places children at risk for the development of internalizing problems. A key consideration when investigating the link between childhood social withdrawal

and psychological maladjustment should be to explain how or why withdrawal might be associated with internalizing outcomes such as social anxiety and depression. As a theoretical framework, cognitive models of psychopathology help elucidate and explain problem behaviour.

Cognitive Models of Self-Schemas and Information Processing

Beck (1967/1972, 1976; Beck & Emery, 1985; Beck, Rush, Shaw, & Emery, 1979) has developed a good theory for conceptualizing an individual's predisposition to internalizing disorders (e.g., depression, anxiety, phobias) and cognitive aspects of those disorders. He uses the concept of schemas to explain how depressed or anxious people organize their thought processes. Beck defines "schemas" as relatively stable cognitive patterns, beliefs, or underlying assumptions that have developed from previous experiences in childhood and form the basis for interpretations in a particular situation.

Research has shown that schemas facilitate the recognition, recall, and comprehension of information, influence speed of processing and problem solving, enable the perceiver to fill in missing data with assumptions or guesses, and affect decision making (Ingram & Kendall, 1986). Schema consistent information is efficiently processed, but schema inconsistent information is ignored or misinterpreted (Fiske & Taylor, 1991). Consequently, even when faced with conflicting information, people will reject such information

in favour of an already existing schema. Also, people are better able to recall schema-consistent information which may serve to bias the encoding and retrieval of information.

The self-schema construct contains information about one's own personality, appearance, and behaviour, and is centrally involved in guiding the interpretation, encoding, and retrieval of this information (Markus, 1977). Self-schemas are typically operationalized and measured using self-reference and memory recall, the latter assessing encoding and retrieval. Self-schemas facilitate the processing of information so that personal information that is relevant to the schema is easily accessed and recalled (Markus, 1977).

The most commonly used method for assessing self-schemas is drawn from the information processing paradigm. Information processing models, which were initially developed by experimental cognitive psychologists (e.g., Craik & Tulving, 1975), provide a framework for examining the cognitive mechanisms that underlie and mediate cognition, affect, and behaviour (Ingram & Kendall, 1986). These models have been applied to studies of social cognition (Dodge & Frame, 1982; Milich & Dodge, 1984) and studies in abnormal psychology (Ingram & Kendall, 1986). The information processing approach provides an empirical methodology to study cognition and does not rely exclusively on self-reports which may be affected by extraneous factors such as social desirability. The construct of self-schemas can be directly

assessed with this approach.

Paralleling the theoretical notion of schemas, empirical research on the information processing mechanisms of depression has been undertaken. Beck and colleagues (Beck et al., 1979) postulate that depressogenic schemas are formed as a result of beliefs or rules that are transmitted from parents to children and from unhappy or painful childhood experiences. In keeping with Beck's theory, depressed adults readily process and remember negative self-relevant information. Numerous laboratory studies have shown that depressed persons, in comparison to nondepressed persons, evaluate themselves more negatively (e.g., Hammen, Marks, deMayo, & Mayol, 1985), evaluate their performances more negatively (e.g., Loeb, Beck, & Diggory, 1971), and show better recall of negative self-relevant information than positive information (e.g., Nelson & Craighead, 1977).

Whereas biased information processing is characteristic of depression in adults, few studies have examined the role of negative self-schemas in children. One might hypothesize that children who tend to have negative cognitions, especially about the self, may be more likely to suffer depression. Even though the validation of Beck's model has been limited mainly to studies with adults, a few studies support the applicability of the self-schema model to children. Employing a depth-of-processing incidental recall paradigm, Hammen and Zupan (1984) compared 14 depressed and 12 nondepressed

third- to sixth-grade children ranging from 7 to 12 years old. Consistent with the adult studies, their results indicated better recall for words encoded under self-referent instructions than for words encoded under semantic or structural instructions. Compared to nondepressed children, depressed children showed poorer recall of positive self-descriptive words and similar recall of negative self-referent words. Subsequently, Zupan, Hammen, and Jaenicke (1987) compared 8- to 16-year old depressed and nondepressed girls and boys (20 per group) and found that the clinically depressed children viewed themselves more negatively, and showed superior recall of negative self-descriptive words, thereby indicating the presence of negative self-schemas. Another investigation also found that depressed children aged 7 to 14 years voiced more negative thoughts about themselves than did nondepressed children (Sanders, Dadds, Johnston, & Cash, 1992). Lastly, Jaenicke et al. (1987) revealed that children who have mothers with major affective disorder had a more negative self-concept and recalled less positive self-descriptives compared to children with "normal" mothers. Thus, the capacity for cognitive bias and selective recall exists in children as well as adults; moreover, children who are at risk for depression display negative cognitions about the self.

Summary

Longitudinal data indicate that by middle childhood the ramifications of

social withdrawal include a disproportionate number of social failure experiences and an emerging sense of personal incompetence (Rubin & Lollis, 1988). If these children continue to feel poorly about their competencies, then they may be at risk for internalizing problems. In fact, preliminary studies (Rubin, Hymel, & Mills, 1989; Rubin & Mills, 1988; Strauss et al., 1986) indicate that social withdrawal in young children may be a precursor to negative social self-perceptions and internalizing difficulties (i.e., anxiety, loneliness, and depression) in middle childhood. Thus, withdrawn children who experience social anxiety, low social interaction, and negative self-perceptions may subsequently develop internalizing disorders.

There is, however, little theoretical understanding as to how these symptoms might develop. Cognitive models of self-schemas and information processing provide a theoretical framework through which to examine a possible link between social withdrawal and psychological maladjustment. Negative self-schemas, which entail endorsing negative information about oneself (negative self-perceptions) and recalling such information, have long been considered central to the development of anxiety disorders and depression (e.g., Beck, 1967; Cicchetti & Schneider-Rosen, 1985). In particular, several studies have shown that negative self-schemas are associated with depressive affect in adults (Derry & Kuiper, 1981; Kuiper & Derry, 1982; Kuiper, Olinger, MacDonald, & Shaw, 1985) and in children (Zupan

et al., 1987). Consequently, children showing signs of negative self-schemas may be at risk for internalizing disorders such as depression. Yet, to date there are no data regarding the processing of personal information in socially withdrawn children. Notably, the information processing methodology offers a measure that may be suitable for testing hypotheses about self-schemas in socially withdrawn children. If socially withdrawn children are at risk for internalizing disorders, then one factor that might contribute to children experiencing such distress could be the presence of negative self-schemas.

Objectives of the Present Study

The purpose of the present study was to investigate the presence of self-schemas and internalizing problems in socially withdrawn children. This study addressed a number of objectives in order to advance the current state of knowledge and improve upon previous methodology.

In an effort to expand upon the current state of knowledge, this research was designed to: (1) examine an important factor (i.e., self-schemas) which may be associated with social withdrawal; (2) extend existing research by providing a more comprehensive sampling of self-concept (i.e., not restricted to social competence); (3) assess the behavioural/ emotional functioning of socially withdrawn children, particularly internalizing problems; and (4) study the whole spectrum of children regarding psychosocial adjustment by comparing

withdrawn children to average children (control group) and to aggressive children (deviant contrast group). Certain cognitive patterns might be characteristic of adjustment problems in general; on the other hand, they might be unique to specific disorders or groups. Therefore, the latter objective contrasted personal information processing across different childhood disorders in order to discover how socially withdrawn children's cognitive processing differed from other groups of children.

A number of conceptual and methodological improvements over previous research were incorporated into the study. Conceptually, focusing on passive withdrawal was more appropriate than focusing on active isolation. Because of its nature, passive withdrawal might constitute a better predictor of depression than active isolation. Children were therefore identified only on the basis of those Revised Class Play items that assessed passive withdrawal (Rubin & Mills, 1988; Younger & Daniels, 1992). Moreover, this study focused on internalizing problems which are conceptually more relevant than externalizing problems.

In order to improve upon the methodological limitations of the existing literature, the present investigation did the following: (1) studied a school sample, rather than a clinical sample, in order to provide a more representative population of socially withdrawn children, and thereby enhance generalizability; (2) used well validated independent and dependent measures; (3) identified

children through peer assessments which have better validity than teacher or parent ratings, or behavioural observations (Hymel & Rubin, 1985); (4) employed an information processing paradigm to measure self-schemas (i.e., self-perceptions and recall memory) in withdrawn children; (5) improved and modified Hammen's self-schema measure by verifying the comprehension and attributes of word stimuli through pilot testing and adding new stimuli; and (6) assessed the behavioural and emotional functioning of withdrawn children in late childhood/ preadolescence.

The present study investigated the association between social withdrawal, self-schemas, and internalizing problems. The dependent variables consisted of positive and negative self-perceptions, recall of positive and negative self-referent words, and internalizing scores on a behavioural adjustment measure. Personal information processing patterns of socially withdrawn children were compared to those of a control group of average children and of aggressive children. Comparing these three groups in the same study allowed the issue of specificity to be addressed; in other words, are negative self-schemas unique to social withdrawal or are they characteristic of socially maladjusted children in general? In order to test their self-schemas, children first completed a self-referent rating task and then an incidental recall task. With the self-referent rating task children were serially presented with a list of personal adjectives and asked to decide whether the word was

self-descriptive or not. Then, an incidental memory recall of those self-descriptive words followed. Finally, children completed a self-report measure of internalizing and externalizing feelings and behaviour.

Hypotheses of the Present Study

A number of hypotheses were formulated and tested regarding the self-schemas and behavioural adjustment of socially withdrawn children. Because of the multidimensional nature of the self-schema construct (Segal, 1988), the social, emotional, behavioural, intellectual, and physical, and social/ interpersonal elements of the self were explored. According to Beck (1967/1972), negative self-schemas predispose individuals toward depression because they bias the person toward processing negative information and discounting positive information. If socially withdrawn children are at risk for internalizing disorders, then they would be expected to show evidence of negative self-schemas like depressed adults do. Specifically, predictions about two aspects of self-schemas, self-perceptions and recall, were as follows.

Self-Perceptions:

(1) Socially withdrawn children should endorse more negative content words as self-descriptive than nonwithdrawn average and aggressive children.

(2) Socially withdrawn children would rate fewer positive content words as self-descriptive than average and aggressive children.

Recall:

(3) Socially withdrawn children were expected to recall negative self-referent information better than average and aggressive children.

(4) Socially withdrawn children would recall a smaller number of positive adjectives than average and aggressive children.

Behavioural Adjustment:

Preliminary evidence suggests that socially withdrawn children may experience internalizing problems. Early social withdrawal has been found to predict self-reported depressive symptoms in middle childhood (Hymel et al., 1990; Rubin et al., 1989). Behavioural and emotional functioning, especially with regard to internalizing symptomatology, were therefore assessed.

(5) Socially withdrawn children were expected to have significantly higher internalizing scores on a behavioural adjustment measure than average children and aggressive children.

Relation Between Self-Schemas and Internalizing Behaviours:

The degree to which self-schemas related to internalizing behaviours was also assessed by correlating the number of positive and negative words endorsed and recalled with self-reported internalizing scores.

(6) It was predicted that positive self-perceptions and recall for positive words would be negatively related to internalizing scores.

(7) It was predicted that negative self-perceptions and recall for negative words would be positively related to internalizing scores.

METHOD

Overview

The present study consisted of two phases. Phase 1 involved administration of a peer nomination measure, the Revised Class Play, in order to classify subjects into groups. Using peers to evaluate social behaviour yields better validity and reliability than do parental reports or teacher ratings. Peer assessments are considered more valid than other sources, such as parents and teachers, because they are based on multiple raters who have more access to relevant information (Hymel & Rubin, 1985). Because a child's score is based on multiple raters, the effects of individual biases inherent in a single rating source are minimized. Moreover, peer nominations are based on behaviours observed across many settings and under different circumstances. In addition, behaviours are interpreted from the perspective of same-age children and therefore not subject to distortion by adult standards.

Phase 2 involved comparing socially withdrawn children to a nonwithdrawn control group and to an aggressive comparison group on measures of self-schemas (self-perceptions and recall) and internalizing problems. To measure self-schemas, an information processing paradigm was employed; and for internalizing problems, a general measure of psychological adjustment (the Youth Self-Report) was administered.

Participants

The sample was recruited from five elementary schools of the Carleton Roman Catholic Separate School Board in the Ottawa-Carleton region. Parental consent letters which explained the study were distributed in the classrooms (see Appendix A for informed consent letter). To qualify, all children required parental permission and agreed themselves to participate in the study. In order to maximize participation, every student was requested to return a signed consent form whether or not they agreed to participate. To encourage children to return the consent forms, those who did not return their forms within one week received a reminder. Also, letters were written to some teachers listing students who had not yet returned completed consent forms and asking them to remind those students. The researcher also reminded students in person two or three times. With these efforts to increase the return rate, an overall consent rate of 78% was achieved (87.4% for Grade 6 and 68% for Grade 7).

In the first phase, 281 children from Grades 6 and 7 (ages 11 to 13 years old) participated. In the second phase, 70 subjects in Grade 6 (36 females, 34 males) and 62 subjects in Grade 7 (35 females, 27 males) participated (see Table 1). Based on statistical power tests recommended by Cohen (1977) (refer to Appendix B for power analysis calculation) and on the criterion of 10 subjects per variable recommended by Tabachnick and Fidell

(1989), the present sample size far exceeded the required number for detecting group differences.

Insert Table 1 about here

Inclusion criteria. Children who met the following inclusion criteria participated in the second phase of the study:

(1) Withdrawn Group: Children must have scored above the 80th percentile on the passive withdrawal index (Rubin & Mills, 1988) derived from the Isolation–Sensitivity scale of the Revised Class Play (Masten, Morison, & Pellegrini, 1985), **and** below the 50th percentile of the present sample on the Aggression scale.

(2) Aggressive (Comparison) Group: Children must have scored above the 80th percentile of the present sample on the Aggression–Disruption scale of the Revised Class Play **and** below the 50th percentile of the present sample on the passive withdrawal subscale.

(3) Average (Control) Group: Children who scored below the 50th percentile on the passive withdrawal subscale **and** below the 50th percentile of the present sample on the aggression scale were selected for this group.

Table 1

Gender Distribution and Sample Size for Each Group

Group	Female	Male	n
Withdrawn	22	18	40
Aggressive	21	20	41
Average	28	23	51
Total N	71	61	132

Measures

Revised Class Play. The RCP (Masten, Morison, & Pellegrini, 1985) is a peer nomination measure that consists of 30 items (refer to Appendix E). It yields three reliable independent factors labelled Isolation–Sensitivity (Social Withdrawal), Aggression–Disruption, and Sociability–Leadership. The RCP demonstrates good reliability with high internal consistency coefficients (.83, .91, and .94 for the above factors, respectively) and good stability correlations (.80, .77, and .87, respectively) among elementary school children. Construct and concurrent validity have been supported with teacher rated behaviour and behavioural observations. Whereas young children are less able to assess socially withdrawn behaviours in their peers, children are sensitive to such behaviour by Grade 4 (Younger, Gentile, & Burgess, 1993).

This measure asks children to nominate peers for roles in an imaginary play depicting sociable, aggressive, and withdrawn behaviours. During group administration, children were requested to nominate up to three classmates who best fit each of 30 behavioural descriptors. Only children who had consent to participate could either nominate peers or be nominated themselves. Nominations received from peers were used to compute factor scores for each child following procedures outlined by Masten et al. (1985).

Rubin and Mills (1988) break down the Sensitivity–Isolation factor into two subclusters of items reflecting passive withdrawal and active isolation.

Although the entire Withdrawal scale was administered, classification was based on three passive withdrawal items only ("Someone who would rather play alone than with others"; "Someone whose feelings get hurt easily"; and "Someone who is very shy"). (The active isolation items are "trouble making friends"; "can't get others to listen"; and "often left out".) Younger and Daniels' study (1992) provides support for separating the withdrawal scale into these two subscales. For the summary score, the number of nominations received by each child for each item was tallied and then standardized within classes to permit appropriate comparisons. These standardized scores were then summed to compute scores for the factors. Standardizations adjusted for variations in class size, number per grade, and number of boys and girls. Higher scores meant stronger peer perceptions of the identified behaviour.

Self-schema tasks. Self-schema functioning was assessed using a self-referent rating task plus an incidental recall memory task. The depth of processing approach utilized in this study is similar to that used in schema studies with adults (Derry & Kuiper, 1981; Hammen et al., 1985; Kuiper et al., 1985; and Rogers et al., 1977), as well as with children (Hammen & Zupan, 1984). The memory task is based on the assumption that the ease with which information is retrieved from memory can be used to infer the presence of schemas.

For the self-referent task, a large pool of words was gathered from

several sources, including Hammen's studies, self-concept measures, and word dictionaries. Some words also came from Carroll, Davies, and Richman's (1971) "Word Frequency Book" which lists frequencies of words sampled from third to ninth grade reading materials. The selected words were common descriptive adjectives of both positive and negative content. Word frequency and word length were equated for the two types of content. Most of the word items had been previously subjected to an independent norming study by Hammen and Zupan (1984) in which items were rated for imagery attributes, desirability, and depressed/ nondepressed content. Thus, the validity of many items had already been established with children. In addition, a pilot study was conducted to pretest the self-referent rating task in a validation phase.

Pilot Study - recruitment. The pilot sample was recruited from the local Ottawa community. A consent letter which explained the pilot study was distributed to children aged 11 years and their parents (see Appendix F). To qualify, all children required parental permission and agreed themselves to participate. Twelve children (7 boys, 5 girls) 11 years old served as subjects in the pilot study.

Pilot Study - stimulus rating procedure. Though Hammen and Zupan's (1984) word list was drawn from a word frequency book, they did not directly test children's comprehension of the words. Comprehension is important because children could not be expected to rate adjectives as self-descriptive or

recall adjectives they do not understand. Words found not to be well understood by the pilot subjects were deleted. In addition, new words appropriate to the study were added.

Children were instructed "Tell me what this word means."; "What is another word for X?". They were also asked to tell the meaning of each word as if they were describing a person: "Describe (word)– if a person is X"; "What is a (nice) person like?".

The second goal of the pilot study was to rate words for positive and negative content or imagery attributes. To verify whether children actually perceived the stimuli as positive or negative as intended, 12 child judges independently rated them. The judges were asked to categorize the adjectives as either positive, negative, or neutral by rating each word based on the question "For kids your age, is this something good to be?" (yes, no, or "don't know"/"not sure"). Words judged as positive represented desirable traits and words judged as negative represented undesirable traits. Only words for which 80% of subjects agreed on their positive or negative content were included in the study.

Initially, 51 words were assessed for comprehension and desirability. Although every word except two (bold, anxious) was easily read and fully comprehended by at least 88% of the pilot sample, 15 words were deleted from the list due to less than 83% interrater reliability for desirability. For example,

children either considered the following traits **both** "good" and "not good" **or** "neither/don't know": quiet, bold, anxious, tired, sleepy, follower, alone, scared, curious, strange, nervous, hurt, mad, free, sensitive. The latter words were therefore eliminated. Even though words such as "lucky" and "interesting" obtained 100% reliability for comprehension and imagery, they were taken out because they did not constitute good enough trait descriptors. Altogether 36 words were retained (refer to Appendix G).

Self-referent rating task: Description and procedure. To measure children's endorsement of positive or negative words, a self-referent rating task was employed. This task was derived from Hammen and Zupan's (1984) study and the pilot study just described. A final list of 36 stimulus words, 18 judged positive in content (e.g., nice, popular) and 18 judged negative in content (e.g., bad, boring), were utilized in this study. Socially withdrawn, average, and aggressive children were asked to rate the applicability of positive and negative personal adjectives to themselves (see Appendix H for instructions). As self-schemas contain information about personality, appearance, and behaviour, the reading material consisted of adjectives describing such traits (e.g., shy, attractive/ ugly, immature). Also, social and emotional aspects of the self-schema were tapped (e.g., friendly, angry, sad), as well as social anxiety (e.g., embarrassed, ashamed, afraid).

Randomized word lists were generated to ensure that the positive and

negative content adjectives were completely counterbalanced across the rating task. Hence, a different word order in which positive and negative words were randomly distributed was presented to every subject. Presenting words randomly also minimized primacy and recency memory effects.

All words were displayed on 3 x 5 index cards contained in a booklet. Each trial consisted of: 1) a cue question; 2) visual and auditory presentation of the target adjective; 3) a yes/no decision rating by the subject; and 4) a 3-second intertrial interval before the next cue question (see Appendix I for Figure). Thus, the experimenter presented words orally and visually to subjects at 3-second intervals. Then the experimenter asked the cue question "Is this word like you?" or "Describes you?", and then showed the target adjective. An answer sheet was provided that listed the descriptors along with the cue question; this question indicated the encoding instruction ("Like me?") to follow for each word (see Appendix J). For each word subjects made a self-referent judgement (Does this word describe me?); in other words, a child decided whether or not the word described him or her, then circled "Yes" or "No" on the answer sheet.

Incidental recall task: Description and procedure. The second task involved a depth-of-processing incidental recall memory paradigm which assessed encoding and retrieval. Immediately following the self-referent rating task, subjects were unexpectedly asked to recall as many of the words as they

could remember (see Appendix K for verbatim instructions). During a four minute maximum period the experimenter recorded the positive and negative self-descriptives recalled.

Youth Self-Report. The YSR (Achenbach, 1991) is a 112-item self-report measure of feelings and behaviour suitable for children/ adolescents between 11 to 18 years old (see Appendix L). Recognizing the concerns of the School Board's ethics committee, the following four items were eliminated: items #18 ("I deliberately try to hurt or kill myself"), #91 ("I think about killing myself"), #96 ("I think about sex too much"), and #110 ("I wish I were of the opposite sex"). Not only did the potential problems created by their inclusion outweigh the potential benefits, we also thought that these particular items might make some students feel uncomfortable.

The Youth Self-Report identifies syndromes of problems which fall under two broad groupings of Internalizing or Externalizing factors (see Appendix M for YSR Profile example). Subjects chose one of three responses to each item (not true, sometimes true, often true), describing the way he/she felt within the past six months. Previous research on the YSR showed that test-retest reliabilities for the Internalizing scale were .67 for a one-week interval and .52 for a seven-month interval; and that stabilities for the Externalizing scale were .76 and .49, respectively (Achenbach, 1991). With respect to the total problem score, test-retest was .70 (one-week interval) for 11-14 year olds; and .56

(seven-month interval) for 11-14 year olds. There is evidence for content validity, as most YSR items discriminate between clinical and normal samples, and evidence for criterion-related validity of YSR scales, as the scale scores discriminate between referred and nonreferred youths.

Procedure

Both phases of the study were conducted at the schools with all children for whom consent was obtained. These children were tested at their schools by a graduate student in Psychology. Prior to the assessments, each child was briefed about the study (see Appendix C: initial script for Phases 1 and 2).

Phase 1. The first phase of the study involved group administration of the peer nominations (approximately 20-30 minutes per class). This procedure was explained to children in detail (see Appendix D for verbatim instructions). Children were instructed to choose from a class list those people who best fit each statement. Nominations pertaining to boys were separate from nominations pertaining to girls because girls are more frequently nominated for indices of withdrawal (Younger & Daniels, 1992) and both genders were wanted in the sample. Scores were calculated for each subject by summing scores for all items on the appropriate scale. Based on these scores children were identified as socially withdrawn, aggressive, or average (nonwithdrawn/ nonaggressive). As can be seen in Table 1, this screening process yielded 40

withdrawn subjects (22 females, 18 males), 41 aggressive subjects (21 females, 20 males), and 51 average children (28 females, 23 males).

Phase 2. During the second phase of the study, the dependent measures were administered to children who met the inclusion criteria. Each child was tested individually and completed the dependent measures at one point in time. Participants completed self-schema tasks and a self-report measure of behavioural/ emotional functioning. This assessment took approximately 30 to 45 minutes for each child.

During the assessment the self-referent rating task was administered first, followed by the incidental recall task. First, subjects were serially presented with a number of personal adjectives and asked whether the adjective was self-descriptive or not. They were told that this was a word rating game which involved describing what they are like. Second, an incidental recall memory test of these adjectives immediately followed. Children were instructed to verbally report all words they could remember and the examiner recorded their responses. Third, children completed an inventory of internalizing and externalizing behaviours (Youth Self-Report). To control for sensitization effects or carry over effects to the other dependent variables, this behaviour problem measure was given last.

Debriefing

Upon completing these measures, participants received an oral

debriefing (refer to Appendix N). This debriefing began by asking children general questions about their favourite hobbies/ sports; how many brothers/ sisters and close friends they have; and what subjects they like in school. Then the debriefing explained what the study involved (e.g., seeing how well they recall words which relate to them). Lastly, the limits of confidentiality were reiterated and children were thanked for their participation.

RESULTS

Overview of Design and Data Analytic Strategy

A between-group differential design was utilized to test the hypotheses. Consequently, a comparison was undertaken to assess differences between socially withdrawn, average, and aggressive groups on the following six dependent variables: number of positive words endorsed as self-descriptive, number of negative words endorsed as self-descriptive, number of positive words recalled, number of negative words recalled, internalizing scores, and externalizing scores. Although no hypothesis was formulated about externalizing scores, this additional variable was included in the analyses because it constitutes an integral part of behavioural adjustment and a major scale of the Youth Self-Report.

Statistical analyses for Phases 1 and 2 were performed using SPSS. Phase 1 analysis was pursued to identify three groups. After forming the groups, Phase 2 data could be analyzed. Before Phase 2 analyses took place, however, the underlying statistical assumptions were evaluated (e.g., normality, homogeneity). Then, a one-way multivariate analysis of variance (MANOVA) was conducted to assess group differences on the six dependent variables. MANOVA was used because it is designed to test simultaneous differences among groups on multiple dependent variables (Pedhazur, 1982). When the dependent variables (DVs) may be intercorrelated, MANOVA is also indicated.

Further, MANOVA controls the Type I error rate (Bray & Maxwell, 1982).

Two concerns dictate the choice of the multivariate criterion: power and robustness (Norusis, 1988). First, the test statistic should detect differences when they exist; and second, the test statistic should not be affected much by departures from the assumptions. When differences among groups are spread along several dimensions, the ordering of the test criteria in terms of decreasing power is Pillai's trace, Wilks' lambda, Hotelling's trace, and Roy's greatest characteristic root (Norusis, 1988). Although Pillai's trace is the most robust criterion, the most commonly used test statistic is Wilks' lambda. Both Wilks and Pillai provide an overall test of the null hypothesis with two or more groups, but Pillai is more suitable for unequal n's. Moreover, because of its robustness, the significance level based on Pillai is reasonably correct even when the assumptions are violated.

Given that the omnibus MANOVA was significant, the univariate effects were examined. As running multiple univariate F-tests capitalizes on chance factors, the Bonferroni procedure was used to control for experiment-wise error rate (Bray & Maxwell, 1982). With this Bonferroni procedure to correct for bias, the overall alpha level was partitioned to yield an alpha level set at .01 among the univariate F-tests and stepdown analyses. Thus, the significance levels are adjusted for the fact that six tests, rather than one, are being performed.

Subsequently, Tukey-HSD tests for all possible pairwise comparisons

and unequal n's served as post hocs. Tukey's test provides a balance between power and control of alpha. In addition, stepdown analysis was undertaken as a posthoc to MANOVA because a few correlations exceeded 0.3 indicating nonindependence. Having outlined the design and data analyses for the present study, Phase 1 analysis will be described next.

Phase 1 Data Analysis

Phase 1 data analyses were carried out on the complete sample of 281 subjects in order to form the groups. First, raw scores for each child were tallied by adding the number of nominations received from classmates for all RCP items. These scores were divided by the number of raters in the class minus one to yield proportions. Then, scores were computed for each factor or scale by adding nominations for the relevant items on each scale.

Visual examination of these data revealed that several distributions were positively skewed. This is typical of peer nominations measuring maladjusted behaviours of withdrawal and aggression (Ledingham, 1981). Inclusion criteria for the groups were based on percentiles which require the calculation of z-scores; but z-scores assume a normal distribution. Before converting data to z-scores, therefore, a log transformation was used to reduce skewness as suggested by Tabachnick and Fidell (1989). Afterward computed summary scores were standardized through z-score transformations within grade and by

sex to adjust for unequal sizes of grade and sex distributions. Last, subjects were assigned to groups depending on their scores (for example, $z > .84$ is equivalent to > 80th percentile).

Evaluation of Assumptions

Before proceeding to Phase 2 analyses, the underlying assumptions to MANOVAs were tested to check for violations. Variables were examined to screen grouped data and check for problems related to outliers, missing data, skewness, homogeneity of variance-covariance, multicollinearity and singularity. Any problems were subsequently addressed. As a serious limitation of MANOVA is sensitivity to outliers, data screening began there.

Outliers. MANOVA is particularly sensitive to outliers because extreme scores can produce either a Type I or Type II error with no hint in the analysis as to which error has occurred (Tabachnick & Fidell, 1989). To detect univariate outliers within each group, residuals exceeding a z-score of 3.0 (calculated $M + 3 (SD)$) were considered outliers. Two outliers were found with the negative self-perception variable (one in the aggressive group and one in the control group); one outlier was found in the withdrawn group for the positive recall variable; one outlier was found for negative recall in the control group; one outlier was found for the internalizing variable in the aggressive group; and one outlier was found among the aggressive group for the externalizing

behaviour variable. To deal with outliers, Tabachnick and Fidell (1989) recommend either transformation or deletion. Given the large sample size of the present study, these six subjects were eliminated from consideration. Afterward data screening could continue.

Multivariate outliers for each cell were examined using the SPSS Regression program. No within-cell outliers were identified at $p < .001$ using Mahalanobis distance, chi-square(7, N=132) = 24.32, $p = .001$.

Normality - Skewness. Other assumptions needed for MANOVA are that the dependent variables (DVs) have a multivariate normal distribution and that individual DVs should be normally distributed within a group (Tabachnick & Fidell, 1989). MANOVA is robust to a modest violation of normality if the violation is created by skewness rather than by outliers (Norusis, 1988). A conservative level of significance was used (alpha=.001) to test whether the distributions were skewed. Yet no skewness was found on any variables using a z-score of 3.29, $p = .001$. In addition, normality was assessed using the normal probability plots. Among Phase 2 data the normal plots of each DV are approximately straight lines; hence, the distributions appeared normal and the observed scores have a fairly normal distribution.

Homogeneity of variance-covariance matrices. Box's M test provides a sensitive multivariate test for homogeneity of dispersion matrices. This test is based on the determinants of the variance-covariance matrices for each cell

and the pooled variance-covariance matrix. Box's M shows no statistically significant deviation from homogeneity of dispersion matrices: $F(42, 45454) = 1.05$, $p > .37$ (not significant). Moreover, analysis of Box's M test of multivariate homogeneity of variance indicated no violation of this assumption with chi-square (42, N=132) = 44.27, $p > .37$.

Multicollinearity and singularity. Pearson correlation coefficients between variables were inspected to detect multicollinearity and singularity. As shown in Table 2, correlations among the dependent variables were not high and certainly below the suggested $r = .90$ value (Tabachnick & Fidell, 1989). The correlation matrices show that the DVs are intercorrelated, but the highest $r = .46$. Further, the log(determinant) of pooled within-cells variance covariance matrix is not close to zero (13.42); therefore, multicollinearity is not a problem.

Insert Table 2 about here

Bartlett's test of sphericity also tests for correlations among DVs and is based on the determinant of the within-cells correlation matrix. Given the log(determinant) is small (-0.69) and the observed significance level is <.001, the hypothesis that the variables are independent is rejected. Thus, neither multicollinearity nor singularity was present.

Table 2

Pearson Product Moment Correlations Between Self-Perceptions, Recall, and Behaviour Problem Scales for the Whole Sample (N=132)

	1	2	3	4	5	6
1. SPYP	--	-.39**	.14	-.08	-.41**	-.12
2. SPYN		--	-.06	.00	.46**	.32**
3. SSRP			--	.15	-.08	-.08
4. SSRN				--	.13	.11
5. INTT					--	.40**
6. EXTT						--

Note. SPYP=positive self-perceptions; SPYN=negative self-perceptions; SSRP=recall of positive descriptors; SSRN= recall of negative descriptors; INTT=Youth Self-Report internalizing T-score; EXTT=Youth Self-Report externalizing T-score.

* $p < .05$

** $p < .01$

Overall, the evaluation of assumptions of normality, linearity, homogeneity of variance-covariance matrices, and multicollinearity were satisfactory. Given that the distributions of the variables have been examined for non-normality, linearity, outliers, and inequality of variances and no significant violations exist, hypothesis testing about group differences can begin.

Hypotheses of Self-Schemas and Behavioural Adjustment Among Socially Withdrawn, Average, and Aggressive Children

This study aimed to determine whether socially withdrawn children differed from average and aggressive children with respect to personal information processing and behavioural functioning. Specifically, the hypotheses stated that, compared to average and aggressive children, socially withdrawn children would endorse less positive items as self-descriptive, more negative items as self-descriptive, have poorer recall of positive descriptors, better recall of negative descriptors, and score higher on the internalizing scale of the YSR. Phase 2 analyses will be presented in terms of hypotheses concerning each dependent variable.

Phase 2 Data Analyses

In order to determine whether withdrawn children differed from average and aggressive children on measures of self-schemas and behavioural

adjustment, a between-subjects multivariate analysis of variance (MANOVA) was performed on the six dependent variables.

The overall MANOVA results, using Pillais trace test statistic as the criterion (Pillais value=.58), indicated a significant main effect of Group for the dependent variables, approximate $F(12, 250) = 8.46$, $p < .001$. As the omnibus MANOVA showed a statistically significant effect, the univariate results were examined to determine where the differences between the three groups occurred (i.e., clarify which variables indicated an effect).

First hypothesis. The first hypothesis stated that socially withdrawn children would endorse a lower number of positive words as being self-descriptive. With respect to **positive self-perceptions**, univariate analysis (ANOVA) indicated a significant effect of Group on positive self-perceptions using Bonferroni correction (.05/6 = < .001), $F(2, 129) = 20.93$, $p < .001$. To discover which groups differed on this variable, Tukey-HSD post hoc comparisons revealed that withdrawn children were significantly less likely than the average group and the aggressive group to endorse positive self-descriptors (M of SW = 12.85, versus M of AVG = 15.86 and M of AGG = 15.07). The average and aggressive groups did not significantly differ from each other.

Second hypothesis. The second hypothesis stated that socially withdrawn children would endorse a greater number of negative words as being

self-descriptive. With regard to **negative self-perceptions**, a significant effect of Group was also found, $F(2, 129) = 12.21$, $p < .001$. According to post hoc Tukey-HSD tests, withdrawn children endorsed a significantly higher number of negative words as being self-descriptive than the average group and the aggressive group (M of SW = 3.1; M of AVG = 1.49; M of AGG = 2.02). The average and aggressive groups did not differ from one another. Table 3 presents the summary descriptive statistics for the self-perception variables according to group.

Insert Table 3 here

Third and fourth hypotheses. For the incidental recall task, it was predicted that withdrawn children would recall a smaller number of positive words and a greater number of negative words than the average and aggressive children. However, no significant differences emerged between the socially withdrawn, average, and aggressive groups on either recall of positive words (**positive recall**), $F(2, 129) = 1.34$, $p > .05$ (ns), or recall of negative descriptors (**negative recall**), $F(2, 129) = .80$, $p > .05$ (ns), based on the absolute number of words recalled. The recall variables included the actual words **and** synonyms. Table 4 shows cell means and standard deviations for the recall variables as a function of Group. Nonsignificant results were also

Table 3

Mean Number of "Yes" Responses to Descriptors as a Function of Group Status

Variable	Group		
	Withdrawn	Average	Aggressive
Positive Descriptors			
M	12.85	15.86	15.07
SD	2.18	2.12	2.46
Negative Descriptors			
M	3.10	1.49	2.02
SD	1.87	1.19	1.62

obtained using proportions computed in several ways: positive recall divided by positive self-perceptions; negative recall divided by negative self-perceptions; positive recall divided by positive self-perceptions plus negative self-perceptions; negative recall divided by total self-perceptions; positive recall divided by positive recall plus negative recall; and negative recall divided by total recall.

Insert Table 4 here

Fifth hypothesis. It was expected that the groups would differ in their behavioural adjustment, represented by the dependent variables of internalizing and externalizing scores. Specifically, it was expected that socially withdrawn children would have higher internalizing scores than average and aggressive children. With regard to **internalizing scores**, univariate F-tests revealed a significant effect of Group on internalizing scores using Bonferroni correction, $F(2, 129) = 9.81$, $p < .001$. Tukey tests for internalizing scores revealed differences between the socially withdrawn group and the average and aggressive groups. As shown in Table 5, the withdrawn group had higher internalizing T-scores than the other two groups which did not differ significantly from each other (M of SW = 56.48, versus M of AVG = 48.55 and

Table 4

Recall Memory for Positive Descriptors and Negative Descriptors as a Function of Group Status

	Group		
Stimulus	Withdrawn	Average	Aggressive
Positive Words			
M	9.18	9.33	8.61
SD	1.81	2.43	2.17
Negative Words			
M	7.23	7.22	7.71
SD	2.09	2.21	1.78

M of AGG = 51.07.

Regarding **externalizing scores**, the univariate F was also significant using Bonferroni correction, F(2, 129) = 12.36, p < .001. Tukey tests for externalizing scores indicated differences between the socially withdrawn group and the aggressive group (M of SW = 48.63; M of AVG = 48.29; M of AGG = 56.59). As would be expected, the aggressive group had relatively higher externalizing scores compared to the withdrawn group and average group which did not differ from each other. Table 5 presents summary statistics on these measures for each group.

Insert Table 5 here

Sixth and seventh hypotheses. It was predicted that positive self-perceptions and recall of positive words would be negatively related to internalizing scores. As predicted, positive self-perceptions and internalizing scores were moderately correlated in a negative direction (-.41), p <.01; but positive recall and internalizing scores were not significantly correlated. Also, it was predicted that negative self-perceptions and recall for negative words would be positively related to internalizing scores. As predicted, negative self-perceptions and internalizing scores were moderately related (.46), p < .01; but negative recall was unrelated to internalizing scores. Refer to Table 2 for

Table 5

Cell Means and Standard Deviations for Behaviour Problems as a Function of Group Status

	Group		
T-Score	Withdrawn	Average	Aggressive
Internalizing Scale			
M	56.48	48.55	51.07
SD	8.72	8.86	7.98
Externalizing Scale			
M	48.63	48.29	56.59
SD	8.23	9.33	8.38

correlations between self-perceptions, recall, and behaviour problem scales.

Stepdown Analyses

Although stepdown analyses are not specifically related to the hypotheses, the Roy-Bargman stepdown analysis is required as a posthoc to MANOVA when the within-cells correlations among the dependent variables exceed $r = .30$ (Tabachnick & Fidell, 1989). As depicted in Table 6, a few intercorrelations are greater than 0.3. A stepdown analysis therefore investigated the significant main effect of Group on the individual DVs.

Insert Table 6 about here

According to Tabachnick and Fidell (1989), the dependent variables must be prioritized on the basis of theoretical and practical considerations, or the strength of the associations. The procedure entails the highest priority dependent variable being tested in a univariate ANOVA and the remaining dependent variables being tested in a series of ANCOVAs. Reported herein are stepdown analyses for two different orders. For both orders, self-perception and behaviour problem variables were entered into the analysis before the recall variables because the non-significant univariate Fs and low correlations for positive and negative recall suggested that they were not

Table 6

Pooled Within-Cell Correlations Among Self-Perceptions, Recall, and Behaviour Problem Scales

	1	2	3	4	5	6
1. SPYP	--	-.24	.16	-.11	-.28	-.19
2. SPYN		--	-.06	.01	.37	.40
3. SSRP			--	.17	-.09	-.02
4. SSRN				--	.15	.07
5. INTT					--	.48
6. EXTT						--

Note. SPYP=positive self-perceptions; SPYN=negative self-perceptions; SSRP=recall of positive descriptors; SSRN= recall of negative descriptors; INTT=Youth Self-Report internalizing T-score; EXTT=Youth Self-Report externalizing T-score.

contributing to the variance in the independent variable of Group.

In the first stepdown analysis, positive self-perception was given the highest priority, followed by internalizing scores, then negative self-perception, then externalizing scores, and recall variables last. Results of this stepdown analysis are summarized in Table 7. While the externalizing variable made a unique contribution to predicting group differences, $F(2, 126) = 22.70$, $p < .001$, the internalizing variable did not contribute significantly to predicting the Group effect, $F(2, 128) = 2.75$, $p > .05$, once positive self-perception had been entered.

Insert Table 7 here

The second stepdown analysis had the following order: behaviour problem variables, positive self-perception, negative self-perception, recall variables. Results indicated that, with differences due to internalizing and externalizing variables already entered, both positive self-perception and negative self-perception made unique contributions to predicting group differences, $F(2, 127) = 12.73$, $p < .001$, and $F(2, 126) = 5,30$, $p < .01$, respectively.

Insert Table 8 here

Table 7

Univariate and Stepdown Analyses of the Six Dependent Variables for the Significant Main Effect of Group: First Order

Variable	df	Univariate F	df	Stepdown F
SPYP	(2, 129)	20.93*	(2, 129)	20.93*
INTT	"	9.81*	(2, 128)	2.75
SPYN	"	12.21*	(2, 127)	2.77
EXTT	"	12.36*	(2, 126)	22.70*
SSRP	"	1.34	(2, 125)	1.59
SSRN	"	.80	(2, 124)	1.28

Note. SPYP=positive self-perceptions; SPYN=negative self-perceptions; SSRP=recall of positive descriptors; SSRN=recall of negative descriptors; INTT=Youth Self-Report internalizing T-score; EXTT=Youth Self-Report externalizing T-score.

* $p < .05$

Table 8

Univariate and Stepdown Analyses of the Six Dependent Variables for the Significant Main Effect of Group: Second Order

Variable	df	Univariate F	df	Stepdown F
INTT	(2, 129)	9.81*	(2, 129)	9.81*
EXTT	"	12.36*	(2, 128)	19.70*
SPYP	"	20.93*	(2, 127)	12.73*
SPYN	"	12.21*	(2, 126)	5.30*
SSRP	"	1.34	(2, 125)	1.59
SSRN	"	.80	(2, 124)	1.28

Note. SPYP=positive self-perceptions; SPYN=negative self-perceptions; SSRP=recall of positive descriptors; SSRN=recall of negative words; INTT=Youth Self-Report internalizing T-score; EXTT=Youth Self-Report externalizing T-score.

* $p < .05$

DISCUSSION

The present study aimed to determine whether socially withdrawn children differed from socially average and aggressive children with respect to self-schemas and behavioural-emotional functioning. The following discussion provides an overview and integration of the findings. Contained also in this discussion are possible explanations and implications of the results. Then limitations of the present study are delineated. Finally, practical implications of the current findings and avenues for future investigation are discussed.

Using an information processing methodology, the hypotheses about self-schemas were partially confirmed. As predicted, socially withdrawn children perceived themselves less positively than did average and aggressive children. Moreover, withdrawn children perceived themselves more negatively than did average and aggressive children. These findings are consistent with previous research with younger children. As the literature review indicated, Rubin and colleagues (Hymel et al., 1990; Rubin et al., 1989) found that withdrawn children of elementary school age reported lower perceived social competence. The current study extends and goes beyond this work by illustrating low self-concept in multiple domains in an older group of passive withdrawn children.

Not only did the groups differ with respect to positive self-perceptions, but this variable was the most important of all those examined. While less

positive self-perceptions and more negative self-perceptions were related to passive withdrawal, a lack of positive self-evaluation explained more than the existence of negative self-evaluation. Having fewer positive self-perceptions, therefore, may be at least as important to consider as having negative self-perceptions. Most importantly, the finding that socially withdrawn children had few positive self-perceptions fits perfectly with the literature comparing normal versus depressed individuals. Abramson and Alloy (1990) have noted that normal, nondepressed adults show positive biases in cognitions about the self. This optimistic, as opposed to realistic, manner of perceiving themselves is thought to be important for adaptive or evolutionary reasons (Abramson & Alloy, 1990). It appears, however, that socially withdrawn individuals do not have such a mechanism to protect them against depressogenic cognitions. Therefore, it might be difficult for them to maintain a positive or nondepresssed state when faced with adversity.

Whereas the withdrawn group acknowledged significantly less positive and more negative self-perceptions than did the average and aggressive groups, the aggressive group did not significantly differ from the average group with respect to positive or negative self-perceptions. This finding is consistent with other studies that assessed self-perceived competence among aggressive children (e.g., Hymel, Bowker, & Woody, 1993). The finding that the withdrawn group differed significantly from the average group on self-perceptions, but the

aggressive group did not, suggests that self-perceptions may be a risk factor unique to social withdrawal versus other forms of problem behaviour.

Contrary to expectation, the groups did not differ on recall of positive or negative descriptors. Partial explanation for these results comes from previous studies that tested self-schemas in adults. Kuiper et al. (1985) found that clinically depressed adults recalled negative self-relevant information better than did nondepressed adults. On average, the socially withdrawn children in this study were not clinically depressed. As has been previously suggested, recalling negative personal information may be mood dependent (Hammen & Zupan, 1984). Therefore, negative self-schemas are more likely to be triggered when a person becomes clinically depressed. In fact, past research shows that current mood is the strongest predictor of negative self-schemas (Kuiper et al., 1985; Zupan et al., 1987). Instead of being stable enduring cognitive structures, then, depressive self-schemas may vary with current mood state.

From a general measure of psychological functioning, the Youth Self-Report, a good indication of problems in preadolescence was gleaned. As predicted, socially withdrawn children reported that they experienced more behavioural and emotional problems of an internalizing kind than did average and aggressive children. Although these results reached statistical significance, their practical significance could be addressed. The results were clinically meaningful in terms of knowing which group of children are prone to

internalizing problems. As a sample drawn from the general population, though, the overall score for the internalizing scale was not in the clinical range.

These findings indicate that children who are shy, interact infrequently with peers, isolate themselves, and who are hypersensitive tend to experience a poor self-concept and internalizing problems. This study therefore adds further weight to the developmental pathway model put together by Rubin, LeMare, and Lollis (1990) which illustrates the correlates of social withdrawal at various stages of development. In preadolescence, passive withdrawal was indeed related to internalizing problems.

Covering the range of maladjusted children and controlling for problem status enabled this design to show that these problems belong to a specific group, rather than being characteristic of maladjustment in general. In other words, passively withdrawn children differ in notable ways from other distressed groups, namely aggressive children. Specifically, low self-concept and internalizing problems are unique to passively withdrawn children.

Overall, then, at least one of the self-schema tasks showed the operation of negative self-schemas in the processing of self-relevant information. In late childhood to early adolescence, socially withdrawn children have negative cognitions about themselves compared to their nonwithdrawn peers. Evaluated among preadolescents, passive withdrawal was not only associated with negative self-perceptions, but also with internalizing difficulties.

Because this sample of withdrawn children was approaching adolescence, these findings strengthen the notion they may be at risk for internalizing disorders in adolescence and adulthood.

Limitations of the Present Study

Several limitations of the current study should be noted. The following restrictions pertain to the method of group identification, internal validity, method of self-report, and correlation versus causation.

To follow previous literature this study used a distinct groups approach by treating social withdrawal and aggression as dichotomous variables. If withdrawal had been treated as a continuous variable, however, information might have been added in terms of whether higher levels of withdrawal predict even lower self-perceptions and higher internalizing scores. The analyses could also have included a comorbid group of aggressive/ withdrawn children and assessed their problem status.

Although the methodology followed previous self-schema studies, the incidental recall task could have been approached differently by subjects in a school setting versus a laboratory or clinic setting. When trying to remember the words, some subjects seemed to focus primarily on their memory performance. They tried to come up with as many words as possible through means such as putting the prefix "un" before the positive words (e.g., attractive/

unattractive, friendly/ unfriendly). Instead of this scenario, however, they could have been recalling synonyms for the actual words. Synonyms were treated as if the subject recalled the actual word, having remembered and processed the same concept. For example, the words "unattractive" and "ugly" were considered to be synonyms.

Further, the conceptualization and measurement of information processing as it relates to depression risk should better match each other. What should not be measured is recall for any negative information, but recall for negative traits that people think describe them because this is the information that is activated on a regular basis. Consequently, the methodology should be more commensurate with an information processing model. In addition, future studies could alter the instructions to "Tell me which words you said described you" because then children's propensity to readily recall these descriptors would be assessed.

Yet even with the above limitations, the pattern of results may have been different in a clinical population. While the results of this study are more generalizable because children in the normative population were evaluated, differences between groups on recall memory for positive and negative traits might have been greater if clinical samples had been used. Not surprisingly, the average internalizing score of socially withdrawn children did not fall in the clinical range of the internalizing scale. Removing the two suicide items from

the anxious/ depressed subscale of the Youth Self-Report probably deflated the overall internalizing score; but whether the withdrawn group would have been more likely than the other groups to endorse those specific items is unknown.

An additional possible limitation of this study lies in the fact that other informants were not used to assess the children. Multiple sources usually include parents, teachers, and observers (Achenbach, 1993). Although excluding other sources could be seen as a limitation, the main interest behind this research was the shy/ withdrawn child's subjective experience. Of paramount importance was thus concern for the child's psychological functioning from his/her own perspective. In light of this objective, it is most appropriate to use self-reports. Indeed, one can argue that other people would not be able to describe someone else's inner thoughts and feelings accurately. Moreover, informants are unable to assess others' self-schemas.

Even though a child's self-report can be questioned, there is no evidence that a shy/ withdrawn child is more likely than other children to respond inaccurately. In fact, some research shows that, compared to parent and teacher perceptions, the withdrawn child accurately reports self-perceptions while aggressive children may not (Hymel et al., 1993). Further, several studies show that children of this age level have the ability to describe themselves and others in terms of stable psychological traits or dispositions (e.g., Barenboim, 1981; Livesley & Bromley, 1973).

The last issue pertains to correlation versus causation. Because this study is correlational, one can only conclude that social withdrawal is **associated** with negative self-perceptions and internalizing symptoms. Conceivably, social withdrawal **causes** these psychological problems; on the other hand, negative self-perceptions and internalizing problems might be partly responsible for the withdrawal.

Future Directions

While acknowledging certain methodological limitations, this research nevertheless lays a foundation for future experimental or longitudinal designs. If the effects of social withdrawal have a cumulative impact on development, then differences between socially withdrawn children and their better-adjusted peers would become increasingly noticeable with age. Longitudinal studies following these children into adolescence and adulthood might elucidate causal pathways between social withdrawal, self-evaluation, and internalizing behaviours/ emotions.

Being a core feature of depression and anxiety (e.g., Beck, 1967; Cicchetti & Schneider-Rosen, 1985), perhaps negative cognitions about the self place socially withdrawn children at risk for developing internalizing disorders. Given that negative self-perceptions are central to internalizing disorders, they could represent mediators by which socially withdrawn children develop anxiety

or depression. This hypothesis remains to be determined via the appropriate research designs. The results of the present study provide the groundwork for a mediator model which could be tested using a series of multiple regressions or structural equation modelling.

Continuing to study other maladaptive outcomes might prove valuable. An obvious yet important area to explore is later interpersonal adjustment. One follow-back report by Caspi, Elder, and Bem (1988) suggests that adult males with a history of childhood shyness have poorer personal and occupational/ career adjustment than nonshy males, and that shy adult females were likely to stay at home rather than enter the workforce.

This study did not include an unusual group meeting criteria for **both** aggression and withdrawal. But Hymel, Bowker, and Woody (1993) did assess the self-perceptions of an aggressive/ withdrawn group in Grades 4 / 5 and found that, even though they did not view themselves negatively, they were perceived negatively and rejected by peers. It would be interesting to know how aggressive/ withdrawn children process personal and social information, and whether they are different in this manner from distinctly aggressive or withdrawn children.

Although these results offer some descriptions of their psychological functioning, a detailed description is needed of socially withdrawn children's family functioning. By taking into account important factors in a parent-child

relationship, such as communication and affection, research would move toward a complete understanding of the withdrawn child or adolescent.

Conclusion

This study evaluated one aspect of the risk status of passively withdrawn children and yielded key information that may be important for future research and clinical work. The knowledge gained from this study concerning the association between social relationships, cognitions about the self, and behavioural/ emotional functioning could be incorporated into clinic and school based interventions. Having the knowledge that shy, withdrawn children and young adolescents are prone to poor self-concept and negative affectivity has implications for tailoring individual treatment or group social skills programs to their specific needs. It should be recognized that socially withdrawn children need opportunities to experience success in both personal and interpersonal realms. Moreover, these children may not receive enough clinical attention. In contrast to aggressive children who are often referred by others due to aversive behaviours like fighting, teasing, and showing off, withdrawn children are frequently overlooked because of their inoffensive behaviours.

Whether socially withdrawn children are at risk for depression remains to be determined. As they are already experiencing interpersonal difficulties according to themselves and their peers, they might be at continued risk for

social anxiety and relationship problems. Undoubtedly, a better conceptualization of social withdrawal will improve our clinical approach to this dysfunction. Until our understanding improves, however, the inhibition and reluctance to interact with peers will continue to impede the development of healthy interpersonal relationships.

REFERENCES

Abramson, L.Y., & Alloy, L.B. (1990). Search for the "negative cognition" subtype of depression. In C.D. McCann & N.S. Endler (Eds.), Depression: New directions in theory, research, and practice (pp. 77–109). Toronto: Wall & Emerson.

Achenbach, T.M. (1991). Manual for the Youth Self-Report and 1991 profile. Burlington, VT: University of Vermont Department of Psychiatry.

Achenbach, T.M. (1993). Implications of multiaxial empirically based assessment for behavior therapy with children. Behavior Therapy, 24, 91–116.

Achenbach, T.M., & Edelbrock, C.G. (1978). The classification of child psychopathology: A review and analysis of empirical efforts. Psychological Bulletin, 85, 1275–1301.

American Psychiatric Association (1994). Diagnostic and statistical manual of mental disorders. Washington, DC: Author.

Asendorpf, J. (1991). Development of inhibited children's coping with unfamiliarity. Child Development, 62, 1460–1474.

Barenboim, C. (1981). The development of person perception in childhood and adolescence: from behavioral comparisons to psychological constructs to psychological comparisons. Child Development, 52, 129–144.

Beck, A.T. (1967/1972). Depression: Causes and treatment. Philadelphia: University of Pennsylvania Press.

Beck, A.T. (1976). Cognitive therapy and the emotional disorders. New York: International Universities Press.

Beck, A.T., & Emery, G. (1985). Anxiety disorders and phobias: A cognitive perspective. New York: Basic Books.

Beck, A.T., Rush, A.J., Shaw, B., & Emery, G. (1979). Cognitive therapy of depression. New York: Guilford.

Bray, J.H., & Maxwell, S.E. (1982). Analyzing and interpreting significant MANOVAs. Review of Educational Research, 52, 340-367.

Buss, A.H. (1986). A theory of shyness. In W. Jones, J. Cheek, & S. Briggs (Eds.), Shyness: Perspectives on research and treatment (pp. 39-46). New York: Plenum Press.

Carroll, J.B., Davies, P., & Richman, B. (1971). Word frequency book. New York: American Heritage.

Cicchetti, D., & Schneider-Rosen, K. (1985). An organizational approach to childhood depression. In M. Rutter, C. Izard, & P. Read (Eds.), Depression in children: Developmental perspectives. New York: Guilford.

Cohen, J. (1977). Statistical power analysis for the behavioral sciences (revised). New York: Academic Press.

Coie, J.D., & Kupersmidt, J.B. (1983). A behavioral analysis of emerging social status in boys' groups. Child Development, 54, 1400-1416.

Craik, F.I., & Tulving, E. (1975). Depth of processing and the retention of words in episodic memory. Journal of Experimental Psychology: General, 104, 268–294.

Derry, P.A., & Kuiper, N.A. (1981). Schematic processing and self–reference in clinical depression. Journal of Abnormal Psychology, 90, 286–297.

Dodge, K.A. (1983). Behavioral antecedents of peer status. Child Development, 54, 1386–1399.

Dodge, K.A., & Frame, C.L. (1982). Social cognitive biases and deficits in aggressive boys. Child Development, 53, 620–635.

Engfer, A. (1993). Antecedents and consequences of shyness in boys and girls: A 6–year longitudinal study. In K. Rubin & J. Asendorpf (Eds.), Social withdrawal, inhibition, and shyness in childhood (pp. 49–79). Hillsdale, N.J.: Lawrence Erlbaum Associates.

Fiske, S.T., & Taylor, S.E. (1991). Social cognition (2nd ed.). New York: McGraw–Hill.

Gottman, J. (1977). Toward a definition of social isolation in children. Child Development, 48, 513–517.

Hammen, C., Marks, T., deMayo, R., & Mayol, A. (1985). Self–schemas and risk for depression: A prospective study. Journal of Personality and Social Psychology, 49, 1147–1159.

Hammen, C., & Zupan, B.A. (1984). Self-schemas, depression, and the processing of personal information in children. Journal of Experimental Child Psychology, 37, 598-608.

Harter, S. (1982). The perceived competence scale for children. Child Development, 53, 87-97.

Hartup, W.W. (1983). Peer relations. In E.M. Hetherington (Ed.), Handbook of child psychology (Vol. 4, pp. 103-196). New York: Wiley.

Havighurst, R.J., Bowman, P.H., Liddle, G.P., Matthews, C.V., & Pierce, J.V. (1962). Growing up in river city. New York: John Wiley & Sons.

Honig, A.S. (1987). The shy child. Young children, 42 (No. 4), 54-64.

Hops, H., & Greenwood, C.R. (1981). Social skills deficits. In E. Mash and L. Terdal (Eds.), Behavioral assessment of children's disorders (pp. 347-394). New York: Guilford Press.

Hymel, S., Bowker, A., & Woody, E. (1993). Aggressive versus withdrawn unpopular children: Variations in peer and self-perceptions in multiple domains. Child Development, 64, 879-896.

Hymel, S., Franke, S., & Freigang, R. (1985). Peer relationships and their dysfunction: Considering the child's perspective. Journal of Social and Clinical Psychology, 3, 405-415.

Hymel, S., & Rubin, K.H. (1985). Children with peer relationship and social skills problems: Conceptual, methodological, and developmental issues. In G. Whitehurst (Ed.), Annals of child development (Vol. 2, pp. 251-297). Greenwich, CT: JAI Press.

Hymel, S., Rubin, K.H., Rowden, L., & LeMare, L. (1990). Children's peer relationships: Longitudinal prediction of internalizing and externalizing problems from middle to late childhood. Child Development, 61, 2004-2021.

Ingram, R.E., & Kendall, P.C. (1986). Cognitive clinical psychology: Implications of an information processing perspective. In R.E. Ingram (Ed.), Information processing approaches to clinical psychology (pp. 3-21). Orlando: Academic Press.

Jaenicke, C., Hammen, C., Zupan, B., Hiroto, D., Gordon, D., Adrian, C., & Burge, D. (1987). Cognitive vulnerability in children at risk for depression. Journal of Abnormal Child Psychology, 15, 559-572.

Janes, C.L., & Hesselbrock, V.M. (1978). Problem children's adult adjustment predicted from teachers' ratings. American Journal of Orthopsychiatry, 48, 300-309.

Kagan, J., Reznick, S., Clarke, C., Snidman, N., & Garcia-Coll, C. (1984). Behavioural inhibition to the unfamiliar. Child Development, 55, 2212-2225.

Kaslow, N.J., & Rehm, L.P. (1983). Childhood depression. In R.J. Morris & T.R. Kratochwill (Eds.), The practice of child therapy: A textbook of methods (pp. 27-52). New York: Pergamon Press.

Kazdin, A.E., & Petti, T.A. (1982). Self-report and interview measures of childhood and adolescent depression. Journal of Child Psychology and Psychiatry, 23, 437-447.

Keppel, G. (1982). Design and analysis: A researcher's handbook (Second edition). New Jersey: Prentice-Hall.

Kirk, R.E. (1982). Experimental design: Procedures for the behavioral sciences (Second edition). California: Brooks/Cole Publishing Co.

Kuiper, N.A., & Derry, P.A. (1982). Depressed and nondepressed content self-reference in mild depressives. Journal of Personality, 50, 67-80.

Kuiper, N.A., & MacDonald, M.R. (1982). Self and other perception in mild depressives. Social Cognition, 1, 223-239.

Kuiper, N.A., Olinger, L.J., MacDonald, M.R., & Shaw, B.F. (1985). Self-schema processing of depressed and nondepressed content: The effects of vulnerability to depression. Social Cognition, 3, 77-93.

Ledingham, J. (1981). Developmental patterns of aggressive and withdrawn behavior in childhood: A possible method for identifying preschizophrenics. Journal of Abnormal Child Psychology, 9, 1-22.

Livesley, W.J., & Bromley, D.B. (1973). Person perception in childhood and adolescence. London: Wiley.

Loeb, A., Beck, A.T., & Diggory, J. (1971). Differential effects of success and failure on depressed and nondepressed patients. The Journal of Nervous and Mental Disease, 152, 106–114.

Markus, H. (1977). Self-schemata and processing information about the self. Journal of Personality and Social Psychology, 35, 63–78.

Masten, A.S., Morison, P., & Pellegrini, D.S. (1985). A revised class play method of peer assessment. Developmental Psychology, 21, 523–533.

McCann, C.D., & Endler, N.S. (1990). Depression: New directions in theory, research, and practice. Toronto: Wall & Emerson.

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.

Milich, R., & Dodge, K.A. (1984). Social information processing in child psychiatric populations. Journal of Abnormal Child Psychology, 12, 471–490.

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.

Moskowitz, D.S., Schwartzman, A.E., & Ledingham, J.E. (1985). Stability and change in aggression and withdrawal in middle childhood and early adolescence. Journal of Abnormal Psychology, 94, 30-41.

Nelson, R.E., & Craighead, W.E. (1977). Selective recall of positive and negative feedback, self-control behaviours, and depression. Journal of Abnormal Psychology, 86, 379-388.

Parker, J.G., & Asher, S.R. (1987). Peer relations and later personal adjustment: Are low-accepted children "at risk"? Psychological Bulletin, 102, 357-389.

Patterson, C.J., Kupersmidt, J.B., & Griesler, P.C. (1990). Children's perceptions of self and of relationships with others as a function of sociometric status. Child Development, 61, 1335-1349.

Pedhazur, E.J. (1982). Multiple regression in behavioral research: Explanation and prediction (Second edition). New York: Holt, Rinehart, & Winston.

Piaget, J. (1926). The language and thought of the child. London: Routledge & Kegan Paul.

Piaget, J. (1932). The moral judgement of the child. Glencoe: Free Press.

Quay, H.C., & Werry, J.S. (1986). Psychopathological disorders of childhood. New York: John Wiley & Sons.

Robins, L.N. (1966). Deviant children grown up. Baltimore, MD: Williams & Wilkins.

Rogers, T., Kuiper, N., & Kirker, W. (1977). Self-reference and the encoding of personal information. Journal of Personality and Social Psychology, 35, 677-688.

Rubin, K.H. (1982). Social and social-cognitive developmental characteristics of young isolate, normal, and sociable children. In K.H. Rubin & H.S. Ross, Peer relationships and social skills in childhood (pp. 353-374). New York: Springer-Verlag.

Rubin, K.H. (1985). Socially withdrawn children: An "at risk" population? In B.H. Schneider, K.H. Rubin, & J.E. Ledingham (Eds.), Children's peer relations: Issues in assessment and intervention (pp. 125-139). New York: Springer-Verlag.

Rubin, K.H., & Borwick, D. (1984). Communicative skills and sociability. In H.E. Sypher & J.L. Applegate (Eds.), Communication by children and adults: Social cognitive and strategic processes (pp. 152-170). Beverly Hills: Sage.

Rubin, K.H., Chen, X., & Hymel, S. (1993). Socioemotional characteristics of withdrawn and aggressive children. Merrill-Palmer Quarterly, 39, 518-534.

Rubin, K.H., & Clark, M.L. (1983). Preschool teachers' ratings of behavioral problems: Observational, sociometric, and social-cognitive correlates. Journal of Abnormal Child Psychology, 11, 273-285.

Rubin, K.H., Hymel, S., & Chen, X. (1993). The socio-emotional characteristics of extremely aggressive and extremely withdrawn children. Journal of Abnormal Child Psychology.

Rubin, K.H., Hymel, S., & Mills, R.S.L. (1989). Sociability and social withdrawal in childhood: Stability and outcomes. Journal of Personality, 57, 237-255.

Rubin, K.H., & Krasnor, L.R. (1986). Social cognitive and social behavioral perspectives on problem-solving. In M. Perlmutter (Ed.), Minnesota Symposia on Child Psychology, (Vol. 18, pp. 1-68). Hillsdale, N.J.: Erlbaum.

Rubin, K.H., LeMare, L.J., & Lollis, S. (1990). Social withdrawal in childhood: Developmental pathways to peer rejection. In S.R. Asher & J.D. Coie (Eds.), Peer rejection in childhood (pp. 217-249). Cambridge: Cambridge University Press.

Rubin, K.H., & Lollis, S.P. (1988). Origins and consequences of social withdrawal. In J. Belsky & T. Nezworski (Eds.), Clinical implications of attachment (pp. 219-252). Hillsdale, N.J.: Lawrence Erlbaum.

Rubin, K.H., & Mills, R.S.L. (1988). The many faces of social isolation in childhood. Journal of Consulting and Clinical Psychology, 56, 916-924.

Rubin, K.H., & Mills, R.S.L. (1990). Maternal beliefs about adaptive and maladaptive social behaviors in normal, aggressive, and withdrawn preschoolers. Journal of Abnormal Child Psychology, 18, 419–435.

Rubin, K.H., Moller, L., & Emptage, A. (1987). The Preschool Behaviour Questionnaire: A useful index of behaviour problems in elementary school–age children?. Canadian Journal of Behavioural Science, 19, 86–100.

Rutter, M. (1987). Psychosocial resilience and protective mechanisms. American Journal of Orthopsychiatry, 57, 316–331.

Sanders, M.R., Dadds, M.R., Johnston, B.M., & Cash, R. (1992). Childhood depression and conduct disorder: I. Behavioral, affective, and cognitive aspects of family problem–solving interactions. Journal of Abnormal Psychology, 101, 495–504.

Segal, Z.V. (1988). Appraisal of the self–schema construct in cognitive models of depression. Psychological Bulletin, 103, 147–162.

Strain, P.S., & Kerr, M.M. (1981). Modifying children's social withdrawal: Issues in assessment and clinical intervention. In M. Hersen, R.M. Eiler, & P.M. Miller (Eds.), Progress in behavior modification (Vol. 11, pp. 203–248). New York: Academic Press.

Strauss, C.C., Forehand, R., Smith, K., & Frame, C.L. (1986). The association between social withdrawal and internalizing problems of children. Journal of Abnormal Child Psychology, 14, 525–535.

Sullivan, H.S. (1953). The interpersonal theory of psychiatry. New York: Norton.

Tabachnick, B.G., & Fidell, L.S. (1989). Using multivariate statistics (Second edition). New York: Harper & Row.

Wanlass, R.L., & Prinz, R.J. (1982). Methodological issues in conceptualizing and treating childhood social isolation. Psychological Bulletin, 92, 39-55.

Younger, A.J., & Daniels, T.M. (1992). Children's reasons for nominating their peers as withdrawn: Passive withdrawal versus active isolation. Developmental Psychology, 28, 955-960.

Younger, A.J., Gentile, C., & Burgess, K. (1993). Children's perceptions of social withdrawal: Changes across age. In K. Rubin & J. Asendorpf (Eds.), Social withdrawal, inhibition, and shyness in childhood (pp. 215-235). Hillsdale, N.J.: Lawrence Erlbaum Associates.

Zupan, B.A., Hammen, C., & Jaenicke, C. (1987). The effects of current mood and prior depressive history on self-schematic processing in children. Journal of Experimental Child Psychology, 43, 149-158.

APPENDIX A

LETTER OF INFORMED CONSENT

FOR PHASES 1 AND 2

UNIVERSITÉ D'OTTAWA
UNIVERSITY OF OTTAWA

ÉCOLE DE PSYCHOLOGIE
SCHOOL OF PSYCHOLOGY

Dear Parent/ Guardian:

October 1993.

We would like to request your child's participation in a research project being conducted by Kim Burgess (Ph.D. Student) and Dr. Alastair Younger from the School of Psychology at the University of Ottawa. This project has been approved by the Carleton Roman Catholic School Board, the Principal of your child's school, and by the University's Ethics Review Committee. The goal of the project is to study the relationship between children's social interactions with classmates and their views of themselves.

The project consists of two parts. In the first part children will complete a questionnaire which asks about their perceptions of the social abilities of their classmates. They will pretend to be directors of a play and will be asked who would be the best person to play each role in a play (for example, 'someone who has good ideas', 'someone who would rather play alone than with others', 'someone who shows off a lot'). This group session will last about 15 minutes.

The second part of the study will be conducted several weeks later. We are requesting consent for your child to participate in both parts of the study; however, not all of the children who participated in the first part will participate in the second part. In part 2, children will participate in a 40-minute individual session consisting of an interview and a questionnaire. During the interview they will be asked to describe themselves by responding yes or no to adjectives (for example, happy, nervous, lively). The questionnaire asks children to rate themselves on a variety of behaviours related to their adjustment (for example, 'I like to help others', 'I argue a lot', 'I feel overtired'). Both part 1 and part 2 will be conducted by Kim Burgess during regular school hours.

Participation is completely voluntary and your child may withdraw from the project at any time. All information will be kept strictly confidential and only group averages will be used. This research is not connected to any services provided by your child's school or to your child's grades. If you have any questions or if you wish a summary of the overall findings following completion of the study, contact Kim Burgess or Dr. Younger at 564-2463; or leave a message and your call will be returned. You may keep this letter for your information. Please complete the attached consent form and have your child return it to his/her teacher as soon as possible.

Thanks for your cooperation.

Kim Burgess
Ph.D. Student

Alastair Younger, Ph.D.
Associate Professor

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Consent Form

I have read and understood this letter requesting my son/daughter to participate in a project regarding children's social interactions and views of themselves. I have discussed this with my child, and

_____ I give permission for my child to participate in this project.

_____ I do not give permission for my child to participate in this project.

Child's name: _____
Please print

Child's signature: _____

Child's birthdate: _____ Child's sex: Girl_____ Boy_____
d/m/y

Parent's or Guardian's signature: _____

Telephone Number (optional): _____

Date: _____

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APPENDIX B

POWER ANALYSIS

TO ESTIMATE REQUIRED SAMPLE SIZE

Sample Size Estimation

Statistical power analysis tests were conducted to determine the minimum number of subjects per cell needed to detect group differences. Sample size was determined using Cohen's (1977) method for F tests on means in analysis of variance and covariance. The primary outcome measure for this study was self-schemas. Zupan et al. (1987) used a sample size of 20 per group. Their effect size index (f) was calculated to be 0.53 which yielded a power of .74. This medium effect size (.53) represents a degree of effect likely to have clinical importance as well as statistical meaning (Kirk, 1982). These parameters (including significance level, alpha, set at .05 – one-tailed test) yield a sample estimate of 30 subjects per group. Therefore, in order to detect a significant difference in the degree to which children show negative self-schemas, 30 subjects were needed in each group (total N=90). The number of subjects in this study exceeded the target N.

APPENDIX C

INITIAL SCRIPT FOR THE PROJECT:

PHASES 1 AND 2

Initial Script for the Project - Phases 1 and 2

Remember you brought back the letter saying that you would like to help with the project? You and your parents signed the form agreeing to participate.

First, I want to tell you that your participation in this project is completely voluntary and you may stop participating at any time. Second, all information will be kept strictly confidential. Do you know what "confidential" means? This means that your answers and whatever we talk about here are private. Your answers won't be shown to your teachers, classmates, or your parents. The only exception is if I have a concern about your personal safety (limits of confidentiality).

Your answers will be combined with the answers of other boys and girls in the project; and only numbers are used instead of your name. I enter the answers into a computer and turn them into numbers.

Additional Script for Phase 1:

Introduce the study. We are trying to learn about how kids get along with each other. These answers will only be used for our project. Your answers will **not** be given to school staff or to your parents.

Pretend that you are a director of a play starring the students in this classroom. The director of a play has to do many things but the most important job is to select the right people to act in the play. So your job is to choose students, from the list provided, who could play each part or role best. Try to pick students who seem to fit each part in real life.

This will take about 20 minutes.

Please do not discuss your answers with anyone else.

Additional Script for Phase 2:

We are trying to learn about how [children] see themselves and their behaviours. First, I will ask you to describe yourself by answering "Yes" or "No" to some words if they apply to you. This will take approximately 15 minutes. Then, I will ask you to fill out a questionnaire in which you rate yourself on a variety of behaviours and feelings. This will take about 25 minutes.

Privacy and limits of confidentiality.

Thank you very much for your participation. If you would like, you may see a summary of what we found once the project is finished.

APPENDIX D

INSTRUCTIONS FOR ADMINISTRATION OF

THE REVISED CLASS PLAY

RCP Instructions for Administration

Grades 6 and 7

INTRO

Hello, my name is___. Remember you brought back the letter (consent form) saying that you would like to do the project? You and your parents signed the form agreeing to participate. [Read out participants' names.]

Has anyone ever seen a play either on stage or on TV? Today we're going to do the "Class Play". Imagine that we're going to put on a play. In a play, people play different roles or parts to tell a story. Your role is to be the Director. A director of a play has a very important job. Do you know what the Director does? Solicit input from students and acknowledge every answer as good or interesting. After allowing about 3 or 4 responses say "Those are all important things the Director does. Add "another and most important job the Director has is to choose the actors for parts in the play. That's what we want you to do. You'll be Directors of our pretend play and your job will be to choose the people from the list provided who would be best to act in the play.

CLASS LIST

Hand out the class list **only** to those students who are named on the list. Here is a list of all the kids who brought back their letters from home saying they could participate. Look for your own name. Check that it is spelled correctly. Is there anyone here who is called by a different name than the one I have here on the list? {Then ask child what he/she prefers to be called and change accordingly.} Have everyone make necessary changes. {Who's absent?} Your job is to choose from this list who would be the best to play each part.

If there's more than one child with the same name, say "In your class there are 2 Davids. So we don't get them mixed up, put their last names down or last initial so we know which "David" you mean."

Each list has 2 rows of names-- boys and girls. For each part in the play, you'll pick the best boys and the best girls. You can see that each name has its own number beside it. When you choose someone for a part, you write down their number. Check to make sure you put the right number for the

person you want to choose. Just think about finding those who are the **very most like** the parts in the play.

RCP – SAMPLE ITEM

Now let's look at a sample on the board. {Do this example **before** handing out the class play.} Pick actual people and demonstrate number and lines. Suppose it says "Someone who is very tall". Look on your class list under **boys** then **girls**. Who would be the best boy **and** who would be the best girl to play this part. The best person is the one who acts that way (very most like that) already. Sometimes you can think of more than one person (girl and boy) who would be best. That's o.k. That's why we have extra lines. You can pick up to 3 people. But you don't have to think of 2 or 3 people every time. Write the person's number. Make sure you write numbers clearly. You can pick people even if they're absent today. If you think you are the best, then you can choose yourself.

This play is kind of funny because you can choose more than 1 person for a part (2 or 3), and you can choose the same person more than once-- so one person can play more than one role.

PRIVACY

One last thing that's really important. This is private and confidential. It means that nobody in the school sees your answers -- teachers, friends/ classmates, or your parents. It's only for my project; so it's just between you and me. Remember we only use numbers and not your name (point to the I.D. code). So please don't talk about your answers with your classmates or anyone else.

Everyone has their own idea about who would be best – that's why we're making everyone a Director. Nobody's ideas are better than anyone else's; everybody's ideas are important. There are no right or wrong answers. They're just people's opinions. So I don't want you to copy someone else's opinion. We just want to know your own opinion. Please sit right in front of your paper so others can't see it; and only look at your own paper.

RCP PRACTICE

Now we'll hand out the booklets. Hand out the RCP. Say "Write your name, your age, and today's date etc. on the top page. Use a pencil if you have one instead of a pen. Don't fill in I.D. Everyone ready? Turn to Question #1, the first role in the play: "Someone who is a good leader". Underneath it are 2 columns, one labelled "Boys", the other labelled "Girls". There are 3 lines. Look at your list. Who's the best person to act in this role? Choose the best person for each role in the play. Who would be the best boy and best girl for that part? Do not solicit input for this item. Keep your answer to yourself and put down their numbers.

Remember, you may choose more than 1 person for each part. The same person can play more than one role; that is, a person could play several roles. Pick people who fit each role in real life. You can choose yourself. If you think there's more than 1 person for a part, pick the **best** people.

Only if asked – Put an "X" if you can't think of anyone; if nobody would be good for a part {only if asked or if situation arises}.

Separate lines-– no 2 numbers or names on the same line; only put one number or name per line.

Note: Don't fill in I.D. When mention not filling in I.D. space at the top, tell them we use that space to put a number instead of a name. When they ask what you'll do with with results, tell them all answers are entered into a computer by number and then the answers are combined; nobody's answers are looked at individually.

RCP LAST

Note – **Answer every question**. Sometimes pages stick together. Cover up with your class list. When you're finished, place it upside down on the corner of your desk along with the list of names; turn them over and I'll get them. After you're done, you may do something else quietly so that others won't be disturbed.

Any questions? If you have any questions as you're going along, put up your hand and I'll come over to you.

Are you ready to be a Director? Go ahead, begin.

END

Thank you for being Directors. That's all for part 1 of my project. I'll be back again in a few months to do the last part with some of you.

APPENDIX E

REVISED CLASS PLAY

ID # _____

Revised Class Play

Name: _____

Grade: _____

Age: _____

Date: _____

School: _____

A CLASS PLAY

1. A person who is a good leader.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

2. A person who gets into a lot of fights.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

3. Someone who would rather play alone than with others.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

4. A person with good ideas for things to do.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

5. A person who loses their temper easily.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

6. Someone who shows off a lot.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

7. Someone you can trust.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

8. A person who interrupts when other children are speaking.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

9. Somebody who has many friends.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

10. Someone who waits their turn.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

11. Someone whose feelings get hurt easily.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

12. A person everyone listens to.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

13. Someone who plays fair.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

14. Someone who has trouble making friends.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

15. Someone who acts like a little kid.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

16. Someone who has a good sense of humour.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

17. A person who can't get others to listen.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

18. Somebody who is very shy.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

19. Somebody who is polite.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

20. Somebody who makes new friends easily.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

21. A person who is too bossy.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

22. Somebody who is often left out.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

23. Someone who helps other people when they need it.

BOYS	GIRLS
_____	_____
_____	_____
_____ _____	_____

24. Someone who is usually sad.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

25. A person everyone likes to be with.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

26. A person who can get things going.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

27. Somebody who teases other children too much.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

28. Someone who is usually happy.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

29. Somebody who picks on other kids.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

30. Someone who likes to play with others rather than alone.

BOYS	GIRLS
_____	_____
_____	_____
_____	_____

APPENDIX F

LETTER OF INFORMED CONSENT FOR PILOT STUDY

UNIVERSITÉ D'OTTAWA
UNIVERSITY OF OTTAWA

ÉCOLE DE PSYCHOLOGIE
SCHOOL OF PSYCHOLOGY

Dear Parent/ Guardian:

We would like to request your child's participation in a pilot study which is part of a larger research project being conducted by Kim Burgess (Ph.D. Student) and Dr. Younger from the University of Ottawa. This project has been approved by the University's Ethics Review Committee. The goal of the larger project is to look at the relationship between children's social behaviours and their views of themselves. The purposes of the pilot study are to: (1) show children ages 11 or 12 a list of approximately 45 words and verify whether they can understand the words; and (2) ask children to put those words into categories of "positive", "negative", or "neutral" (neither positive or negative). This will help the above researchers to know which words can be used in the larger project, because we can only use words that children ages 11-12 understand.

Participation is completely voluntary and your child may withdraw from the pilot study at any time. All information will be kept strictly confidential. If you have any questions, contact Kim Burgess at 744-5511; or leave a message and your call will be returned. Please keep this letter for your information and return the attached consent form to K. Burgess as soon as possible. Thank you.

Kim Burgess
Ph.D. Student

Alastair Younger, Ph.D.
Associate Professor

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UNIVERSITY OF OTTAWA

ÉCOLE DE PSYCHOLOGIE
SCHOOL OF PSYCHOLOGY

Consent Form

I have read and understood this letter requesting my daughter/son to participate in a pilot project regarding word comprehension and attributes. I have discussed this with my child, and

_____ I give permission for my child to participate in this project.

_____ I do not give permission for my child to participate in this project.

Child's name:

Child's signature:

Parent's signature:

Date:

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APPENDIX G

SELF-REFERENT RATING TASK:

POSITIVE AND NEGATIVE DESCRIPTORS

POSITIVE AND NEGATIVE DESCRIPTORS

POSITIVE	NEGATIVE
Nice	Bad
Cheerful	Immature
Proud	Angry
Smart	Lonely
Friendly	Boring
Brave	Unhappy
Funny	Nobody
Clever	Moody
Helpful	Embarrassed
Leader	Terrible
Happy	Shy
Lively	Ugly
Popular	Loser
Winner	Sad
Exciting	Awful
Attractive	Foolish
Healthy	Ashamed
Good	Afraid

APPENDIX H

INSTRUCTIONS FOR SELF-REFERENT RATING TASK

Instructions for Self-Referent Rating Task

This is called the Rating Game (from Hammen, 1984). Pointing to booklet, Experimenter says: IN THIS BOOKLET IS A LIST OF WORDS. WHEN WE BEGIN, YOU WILL SEE THE WORDS ONE BY ONE AND I WILL SAY EACH WORD OUT LOUD. YOU WILL ONLY SEE EACH WORD ONCE AND I WILL ONLY SAY EACH WORD ONCE, SO WATCH AND LISTEN CAREFULLY.

AFTER EACH WORD I WILL ASK YOU A QUESTION ABOUT IT. TAKE YOUR TIME AND THINK BEFORE YOU CIRCLE YOUR ANSWER ON THIS ANSWER SHEET (present answer sheet to Subject and point to "yes" and "no" responses).

LET'S TRY SOME FOR PRACTICE. Turn to blank card. SOMETIMES YOU WILL SEE A WORD, I WILL SAY IT OUT LOUD, AND THEN I WILL ASK YOU IF THE WORD IS LIKE YOU OR DESCRIBES YOU. I WILL ASK THE QUESTION: "DOES THIS WORD DESCRIBE YOU?" YOU CAN THEN CIRCLE YOUR ANSWER ON YOUR ANSWER SHEET. (Point again to answer sheet – first practice item – and have child circle answer.) LET'S TRY ONE LIKE THIS. (Turn to Practice Item A and say:) "GIRL, IS THIS WORD (point) LIKE YOU?" (when saying "you", E points to the child). Again, have child circle answer for Practice Item #1 and make sure s/he understands "yes"

vs. "no" rating for this task.

DO YOU UNDERSTAND WHAT WE WILL BE DOING? OKAY, LET'S BEGIN... Experimenter will say each word, followed by the appropriate question.

Question:

LIKE YOU? "IS THIS WORD LIKE YOU?"

Warnings:

a) Don't say the number of the word.

b) Don't say a word twice.

c) Don't tell the meaning of a word to the Subject.

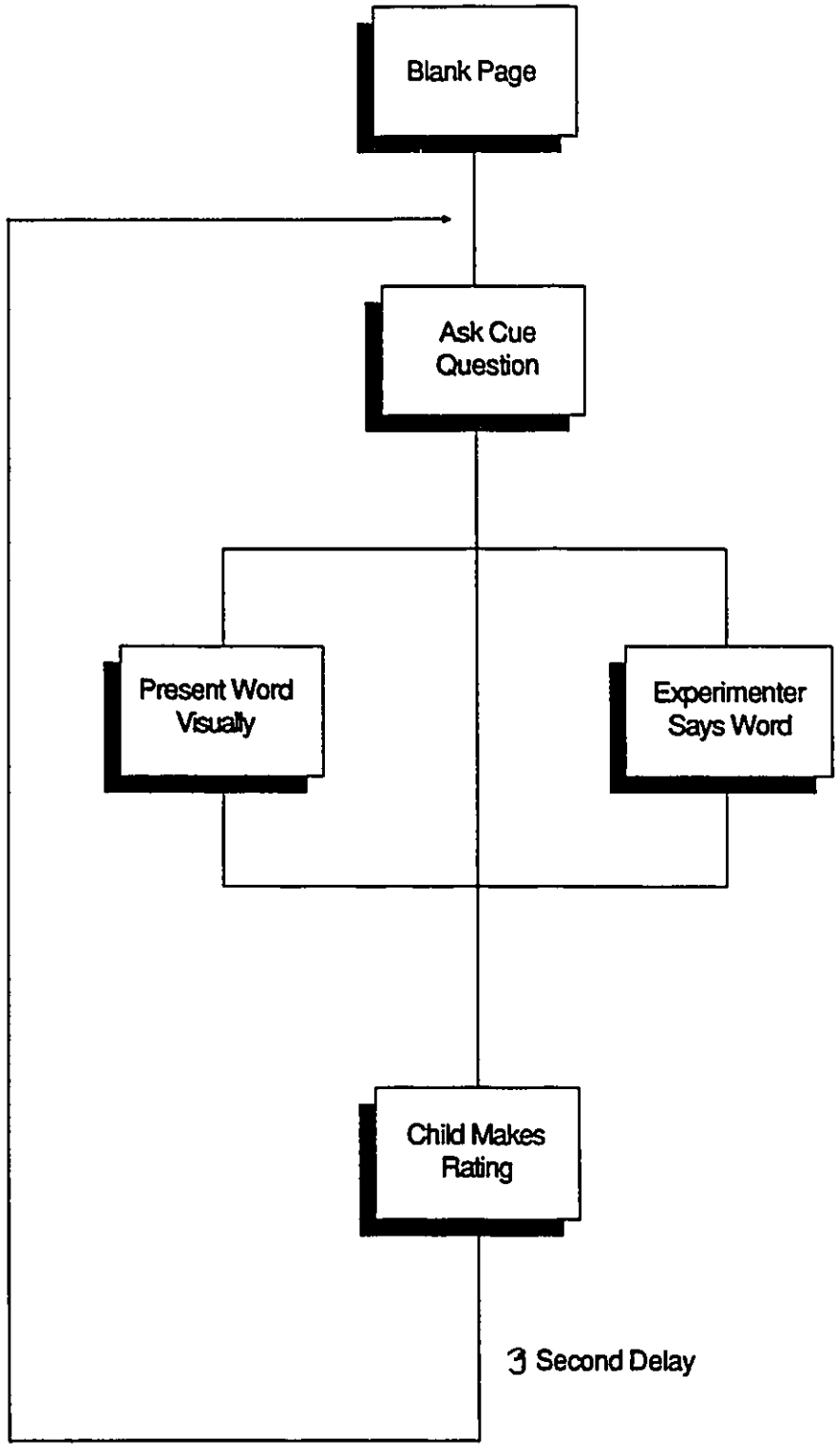
If the child doesn't know the meaning of a word, E can say: I CAN'T TELL YOU WHAT IT MEANS. IF YOU THINK YOU MIGHT KNOW IT, GIVE IT A TRY. IF YOU REALLY DON'T KNOW, LET'S TRY THE NEXT ONE. Encourage child to take a guess if they think they may know; in any event, record which items the child is having trouble with.

APPENDIX I

SELF-REFERENT RATING TASK:

FIGURE

SELF-REFERENT RATING TASK



APPENDIX J

SELF-REFERENT RATING TASK:

RATING GAME ANSWER SHEET

Rating Game Answer Sheet

Self-Referent Condition:

(P) Like you? YES NO

(1) NICE – Like you? YES NO

(2) BAD – Like you? YES NO

(3) CHEERFUL – Like you? YES NO

(4) NOBODY – Like you? YES NO

(5) SHY – Like you? YES NO

(6) ATTRACTIVE – Like you? YES NO

(7) SMART – Like you? YES NO

(8) UGLY – Like you? YES NO

(9) IMMATURE – Like you? YES NO

(10) LONELY – Like you? YES NO

(11) BRAVE – Like you? YES NO

(12) UNHAPPY – Like you? YES NO

(13) POPULAR – Like you? YES NO

(14) ASHAMED – Like you? YES NO

(15) LEADER – Like you? YES NO

(16) FOOLISH – Like you? YES NO

(17) GOOD – Like you? YES NO

(18) HEALTHY – Like you? YES NO

(19) BORING – Like you? YES NO

(20) PROUD – Like you? YES NO

(21) HAPPY – Like you? YES NO

(22) FUNNY – Like you? YES NO

(23) LOSER – Like you? YES NO

(24) AWFUL – Like you? YES NO

(25) EXCITING – Like you? YES NO

(26) LIVELY – Like you? YES NO

(27) SAD – Like you? YES NO

(28) HELPFUL – Like you? YES NO

(29) EMBARRASSED – Like you? YES NO

(30) AFRAID – Like you? YES NO

(31) WINNER – Like you? YES NO

(32) ANGRY – Like you? YES NO

(33) CLEVER – Like you? YES NO

(34) TERRIBLE – Like you? YES NO

(35) MOODY – Like you? YES NO

(36) FRIENDLY – Like you? YES NO

APPENDIX K

INSTRUCTIONS FOR INCIDENTAL RECALL TASK

Incidental Recall Task

(Hammen, 1984)

Immediately follows presentation and rating of last word.

E says: NOW I'D LIKE TO SEE HOW MANY WORDS FROM THE BOOKLET YOU CAN REMEMBER. TELL ME ALL THE WORDS YOU REMEMBER IN ANY ORDER YOU'D LIKE.

Record all words recalled by the child in the order remembered. Do so on the back of the Subject's answer sheet. Allow 4 minutes for recall. If the child has not responded within the first 2 minutes, prompt him/her after 2 minutes. Or if the child stops before 4 minutes are up, say: "CAN YOU REMEMBER ANYTHING ELSE?" or "JUST KEEP ON THINKING FOR A LITTLE WHILE LONGER".

APPENDIX L

YOUTH SELF-REPORT

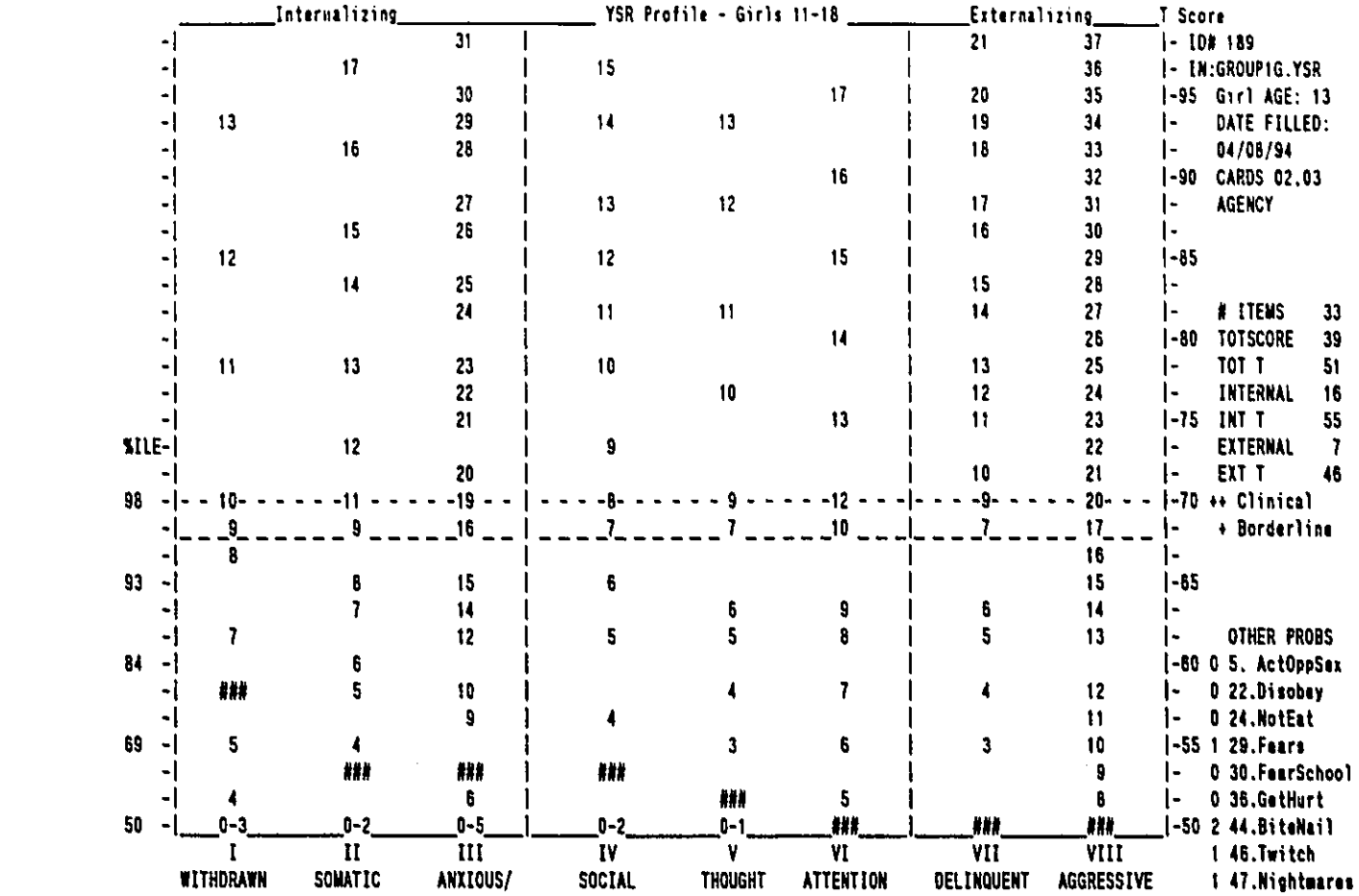
FOR AGES 11-18

(report not included here)

APPENDIX M

YOUTH SELF-REPORT:

PROFILE EXAMPLE



WITHDRAWN		SOMATIC COMPLAINTS		ANXIOUS/ DEPRESSED		SOCIAL PROBLEMS		THOUGHT PROBLEMS		ATTENTION PROBLEMS		DELINQUENT BEHAVIOR		AGGRESSIVE BEHAVIOR	
1	42.Rather BeAlone	0	51. Dizzy	1	12.Lonely	1	1. Acts Young	1	9. Mind Off	1	1. Acts Young	2	26.NoGuilt	1	3. Argues
2	65.Won't Talk	1	54. Tired	1	14.Cries	1	11.Clings	0	40.Hears Things	1	8. Concen-trate	0	39.BadCompan	0	7. Brags
0	69.Secret-ive	0	56a.Aches	-	18.HarmSelf*	0	25.NotGet Along	0	66.Repeats Acts	1	10.Sit Still	0	43.LieCheat	0	16.Mean
1	75.Shy	0	56b.Head-aches	0	31.FearDoBad	0	38.Teased	0	70.Sees Things	0	13.Con-fused	0	63.PrefOlder	0	19.DemAttn
0	102.Under-active	0	56c.Nausea	0	32.Perfect	0	48.Not Liked	0	83.Store Up*	0	17.Day-dream	0	67.RunAway	0	20.DestOwn
1	103.Sad	2	56d.Eye	0	33.Unloved	0	62.Clumsy	1	84.Strange Behav	0	41.Impul-sive	0	72.SetFires	0	21 DestOthr
1	111.With-drawn	0	56e.Skin	0	34.OutToGet	0	64.Prefers Young	0	85.Strange Ideas	1	45.Nervous	0	81.StealHome	0	23.DisobSchl
6	TOTAL	1	56f.Stomach	1	35.Worthless	0	111.With-drawn*	0	61.Poor School	0	62.Clumsy	0	82.StealOut	1	27.Jealous
59	T SCORE	0	56g.Vomit	1	45.Nervous	3	TOTAL	2	TOTAL	4	TOTAL	0	90.Swears	0	37.Fights
49	CLIN T	3	TOTAL	0	50.Fearful	54	T SCORE	51	T SCORE	50	T SCORE	0	101.Truant	0	57.Attacks
		53	T SCORE	0	52.Guilty	45	CLIN T	43	CLIN T	38	CLIN T	2	TOTAL	0	68.Screams
		43	CLIN T	1	71.SelfConsc							50	T SCORE	0	74.ShowOff
				2	89.Suspicious							40	CLIN T	1	86.Stubborn
				-	91.Think Suicide*									0	87.MoodChnge
				1	103.Sad									1	93.TalkMuch
				0	112.Worries									0	94.Teases
				8	TOTAL									1	95.Temper
				54	T SCORE									0	97.Threaten
				43	CLIN T									0	104.Loud
														5	TOTAL
														50	T SCORE
														36	CLIN T

1	46.Twitch	1	47.Nightmares	1	53.EatTooMuch	0	55.OverWeight	0	56h.OtherPhys
0	58.PickSkin	1	76.SleepLess	0	77.SleepMore	2	79.SpeechProb	-	96.ThinkSex
1	99.TooNeat	0	100.SleepProb	-	110.WishOpSex				

Not in Total Problem Score			
2	2.Allergy	0	4.Asthma

*Items not on Cross-Informant Construct

Profile Type:	WTHDR	SOMAT	SOCIAL	DEL-AGG	YSR Soc	Delinq
ICC:	.558**	.000	-.570	-.750	.042	-.545

** Significant ICC with profile type

APPENDIX N

DEBRIEFING SCRIPT

DEBRIEFING SCRIPT

To remind you of what this project was about-- we are looking at how kids get along with their classmates and how this relates to kids' views of themselves and their behaviours. I asked you whether adjectives apply to you and then asked you to recall as many of the adjectives as you could. We'll use this information to help us understand how kids see/ think about themselves. Last, you filled out a long questionnaire. This tells us how kids get along in many different areas.

As I said before, all the information (which includes your answers and other kids' answers) will be kept confidential. This means that it is private between you and me (and Dr. Younger), so nobody else sees your answers-- not your teachers, not your classmates, and not your parents. The only exception is if I have concern for your personal safety. Your answers will be combined with the answers of the other kids who participated in the project (from other classes and other schools); and we use numbers and not your names.

How did you find doing it?

Do you have any questions about the project? Do you have any concerns or anything you want to say?

Thank you very much for participating in the project.

APPENDIX Q

ETHICS COMMITTEE APPROVAL

FOR THE PH.D. RESEARCH PROJECT

UNIVERSITÉ D'OTTAWA
UNIVERSITY OF OTTAWA

ÉCOLE DE PSYCHOLOGIE
SCHOOL OF PSYCHOLOGY

October 6, 1993

Kim Burgess
Ph.D. student
Child Study Centre
120 University
INTRA

Dear Miss Burgess:

Re: Ph.D. Project: Cognitive processing and behavioural adjustment in socially withdrawn children (A. Younger & K. Burgess)

Thank you for sending us the requested modifications on the above mentioned Ph.D. Research Project.

I am pleased to inform you that your project has now received the full approval of the Human Research Ethics Committee of the School of Psychology (Cat. IA). Such approval is valid for one year.

We wish you the best in your project.

Sincerely,

for Pierre Ritchie, Ph.D.
Chair of HRECSP

c.c. A. Younger

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