

The school readiness of high-risk children:
A longitudinal investigation of learning competence during the early grades

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Abstract

The school readiness of high-risk children: A longitudinal investigation of learning competence during the early grades

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The present investigation examines the competence of high-risk children as they face the challenges of school transition and the early grades. A comprehensive perspective on children's school functioning is presented, including their academic performance, work-related skills, and behavioral/interpersonal style. Within a group of children considered vulnerable to school difficulties because of their family background and early functioning, several child, family, and contextual factors are studied as predictors of school outcomes over time. The current study, comprised of three sections, involves a subset ($N = 83$) of participants from the Concordia Longitudinal Risk Project, a 25-year, prospective, longitudinal investigation of individuals at elevated risk for psychosocial adversity. The focus of Part I is on the links between early child characteristics and abilities and various aspects of school competence. In Part II, the ability of high-risk mothers to foster the learning competence of their school-age offspring is examined. Finally, in Part III, an ecological model of school functioning that emphasizes the additive contribution of child, family, and contextual factors in the development of children's learning competence is tested. The findings from the present investigation provide support for the notion that the roots of academic and social competence in the early grades are established during previous periods in children's development. Specifically, children's cognitive functioning during the toddler and

preschool years emerges as one of the most critical markers of school readiness.

Children's early social behavior and gender are also found to bear on various aspects of their school adaptation. Finally, within a group of families from moderate to high-risk backgrounds, the quality of parenting is found to represent a strong predictor of children's school functioning. The current findings are discussed in terms of implications for future research, clinical interventions, and social policy.

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General Introduction

In his 1929 essay entitled "The aims of education", British mathematician and philosopher Alfred North Whitehead wrote that,

In the conditions of modern life the rule is absolute, the race which does not value trained intelligence is doomed...Today we maintain ourselves. Tomorrow science will have moved forward yet one more step, and there will be no appeal from the judgment, which will then be pronounced on the uneducated (p. 5).

In the present day more than at any other time in history, education is at the core of personal growth and societal success. In the context of a global economy and rapidly evolving society, individuals are increasingly expected to acquire specialized skills and knowledge in order to adapt promptly to work requirements and technologies that are constantly changing. As such, increasing years of formal education have become necessary for success in the modern labor market, and a person's educational background currently represents a critical marker of his or her overall adjustment.

Educational attainment is understood to represent the product of experiences in school from a very early point. For this reason, attempts to understand and predict long-term outcomes must emphasize the time when children make the transition from being a "home child" to becoming a "school child" (Alexander & Entwisle, 1988). The present study addresses the school transition of children at elevated risk for learning problems. It involves a longitudinal examination of the risks and opportunities contributing to children's adjustment during this critical period in their life trajectory. The investigation adopts an ecological perspective on children's school readiness, and focuses on child,

family, and contextual factors that can influence learning competence prior to school entry and during the first few years of elementary school. Specifically, attention is directed towards child readiness indicators, parents' personal hardship, parenting, home context, and school environment. These risk and protective factors are predicted to cumulatively contribute to children's educational environment and academic success over time.

The goal of this research is to begin to understand how limited material, personal, and psychological resources and chronic stress in some families can create a difficult school transition for some children, and alternatively how successful school transition can sometimes occur in the midst of adversities. The current study of children's early school success, by moving away from the consideration of the child in isolation to a focus on the child in context, highlights interesting avenues and targets for preventive interventions.

Trajectories Towards School Success and Failure

Changes in the economy of North America over the past thirty years have contributed to placing a premium on formal education as a means of advancement in modern society. As suggested by Belsky and MacKinnon (1994), prior to the mid-1970s and the dramatic loss of manufacturing jobs to overseas competition, many routes out of poverty existed for uneducated individuals. At the time, it was possible for many school dropouts to obtain union jobs and other reasonably high-paying occupations, which could afford them an adequate standard of living. In contrast, in the last 15 to 20 years, our service-oriented economy has come to rest more heavily on technology and specialized knowledge (Drucker, 1999; Quinn, 1992). There are now fewer opportunities for

advancement for individuals who fail to acquire the basic reading, writing, and mathematical skills that are fundamental to occupational success in the modern age (Baydar, Brooks-Gunn, & Furstenberg, 1993). As a result, increasing years of education have become necessary for living-wage employment and success in the labor market (Wilson, 1996).

In this context, school failure and early dropout are more costly than ever, both at a societal and individual level (Belsky & MacKinnon, 1994). Educational underachievement is closely linked to decreases in work productivity, occupational mobility, and earnings, as well as higher rates of unemployment and welfare dependency (Baydar et al., 1993; Berlin & Sum, 1988; Cairns, Cairns, & Neckerman, 1989; Ensminger & Slusarcick, 1992). In parallel to the negative socioeconomic repercussions of limited educational attainment, this situation also bears on the psychological and psychosocial well-being of individuals. First, patterns of poor school achievement predict subsequent involvement in antisocial and delinquent activities, as well as alcohol and drug problems (Brier, 1995; Crum, Ensminger, Ro, & McCord, 1998; Obot & Anthony, 2000). Within a community sample from Montreal, Quebec, Tremblay and his colleagues (1992) demonstrated that for both boys and girls, poor school achievement in the early grades contributes to a delinquent personality style at age 14. In parallel, recent results from the National Longitudinal Survey of Youth, a general population sample of close to 8,000 young American adults, revealed that dropping out of high school was associated with significantly increased levels of alcohol-related problems for participants in their

mid-30s, underscoring the lasting negative sequelae of school failure (Muthen & Muthen, 2000).

In addition, achievement problems and school dropout are related to teenage pregnancy and early parenting. Female adolescents who are poor students with low occupational aspirations are more likely to become teenage mothers than are their high-achieving peers. The most conservative estimates reveal that approximately one third of teenage mothers drop out of school before becoming pregnant (Coley & Chase-Lansdale, 1998; Gilbert & Orok, 1993; Kissman, 1998; Maynard, 1995; Musick, 1994). The connection between school dropout and early pregnancy appears to hold across most racial and ethnic groups, controlling for other family and educational risk factors for early parenting (Manlove, 1998). In turn, bearing children early in the life course is known to increase the risk for a number of adversities, including limited educational attainment, poverty, welfare dependency, single parenthood, divorce, and depression. As such, teenage dropouts who become parents can be said to be vulnerable for continuing hardship and disadvantage over time (e.g., Coley & Chase-Lansdale, 1998; Jaffee, 2002; Jaffee, Caspi, Moffitt, Belsky, & Silva, 2001).

Early Adjustment to School as a Precursor of Long-Term Educational Success

Given the wide-ranging implications of educational attainment for the psychosocial well-being of individuals and the socioeconomic health of our modern society, identifying the factors that help to predict long-term adjustment to school is of primary concern. The way in which children adapt to the demands of school in the early grades appears to be involved in the trajectory towards high-school graduation or dropout

(e.g., Cairns et al., 1989; Entwisle & Alexander, 1998; Janosz, LeBlanc, Boulerice, & Tremblay, 1997). Whereas a positive experience in the first few years of elementary school (i.e., good grades, appropriate level of socio-emotional maturity) generally forecasts continued success throughout children's schooling careers, patterns of early academic struggles, behavioral problems, and socio-emotional immaturity often set into motion a pathway of adversity that may include persistent academic failure, grade retention, feelings of alienation, and early school dropout (see Battin et al., 2000; Janosz et al., 1997; Janosz, LeBlanc, Boulerice, & Tremblay, 2000; Jimerson, Carlson, Rotert, Egeland, & Sroufe, 1997; Reynolds & Bezruczko, 1993). For instance, in a prospective longitudinal study of over a thousand first graders attending inner-city Chicago schools, Ensminger and Slusarcick (1992) demonstrated that low grades and aggressive behavior in first grade led to later dropout, particularly among boys.

To a large extent, the consistency in children's school achievement over time may result from the cumulative consequences of their adaptation during the early grades. Since the curriculum in elementary school is usually taught in a series of graded steps, gaps in early learning tend to have a lasting influence on children's ability to profit from instruction (Entwisle & Hayduk, 1988; Erickson & Pianta, 1989). In parallel, children's behavior and work orientation in the first few months of school set up the expectations that teachers hold for them, which in turn have profound and lasting effects on children's behavior, academic performance, and self-concept (Birch & Ladd, 1996, 1997, 1998; Hamilton & Howes, 1992; Pianta, Nimetz, & Bennett, 1997; Pianta, Steinberg, & Rollins, 1995). Not surprisingly, then, gaps in achievement levels that are present at

school entry remain fairly stable and may become accentuated over time, despite the fact that the skills and competencies of all children progress during the early years of schooling (Entwisle & Alexander, 1999; Entwisle, Alexander, & Olson, 1997; Zill, 2001).

The data suggesting that school entry represents such a significant passage in children's young lives have led a number of scholars to depict this time as a "critical period" in their development (Barth & Parke, 1993; Cowan, Cowan, Schulz, & Heming, 1994; Entwisle & Alexander, 1998; Reynolds, Weissberg, & Kaspro, 1992). The notion of a critical period, which has its roots in ethology, refers to a life stage of limited duration where an unusual response potential of an organism is coupled with particular kinds of environmental stimulation (Cowan et al., 1994; Entwisle & Alexander, 1998; Lorenz, 1952; Tinbergen, 1951). A number of scholars have argued that children's external and internal worlds both undergo profound changes during school transition. The early grades typically coincide with rapid cognitive development in children (Entwisle & Alexander, 1998), and expose them to a new social system with multiple unfamiliar demands and challenges, such as the acquisition of novel academic skills, adherence to classroom routines, cooperation with authority figures other than parents, and formation of interpersonal relationships with peers (Dopkins Stright, & Hoke-Sinex, 1999; Entwisle & Alexander, 1999; Ladd, 1996; Pianta et al., 1995). Children's ability to meet these challenges early on represents a critical factor in their long-term success.

Children's Readiness for School: An Ecological Model

The skills and competencies that children acquire before their entry into the school system determine in large part their adaptation to this novel setting (Alexander &

Entwisle, 1988; Christian, Morrison, & Bryant, 1998; Entwisle & Alexander, 1993). The concept of readiness for school (May & Kundert, 1997; Meisels, 1999; Scarpati & Silver, 1999; Shepard, 1997) is often used to refer to the abilities, or readiness indicators, that children bring with them as they make their transition into school, and that set into motion the trajectory towards success or failure (Belsky & MacKinnon, 1994; Ladd & Price, 1987). For years, studies defined school readiness mostly in terms of cognitive abilities and pre-literacy skills (e.g., Estrada, Arsenio, Hess, & Holloway, 1987; Hess, Holloway, Dickson, & Price, 1984). This body of work indicated that children's mental abilities during the preschool years were linked to their achievement in the early primary grades, as evidenced by their scores in language and mathematics (see Hess et al., 1984; Ladd, 1996; Reynolds, 1989).

Conceptualizing readiness for school however requires paying attention to additional factors beyond cognitive and pre-academic skills. A broader conceptualization of school adjustment is supported by recent research findings indicating that children's cognitive skills account for about 25% of the variance in school outcomes (Pianta & McCoy, 1997; Pianta, Rimm-Kaufman, & Cox, 1999). Increasingly, school success is understood to depend not only on cognitive reasoning and mastery of problem-solving skills, but also on the overall ability of the child to become an autonomous, sociable, and engaged learner in an interpersonal context (Ramey & Ramey, 1999; Reynolds & Bezruczko, 1993). Arriving at a comprehensive definition of school readiness has always represented a challenge for researchers, school board administrators, and policy makers alike. Yet, there is a growing recognition that we need to consider developmental

precursors to school adjustment from a broader, more integrated perspective (Connell, 2001; Crnic & Lamberty, 1994; Ladd, Birch, & Buhs, 1999; Pianta, 1997; Wentzel, 1991). Attention must be paid to a spectrum of child assets promoting school success, as well as family and contextual factors supporting the development of children's cognitive and social/behavioral skills over time (Ladd, 1996).

The ecological framework outlined by Bronfenbrenner (1979, 1986) and Garbarino (1990) and the transactional model presented by Sameroff (1983, 1994) provide rich guidelines for the conceptualization of children's readiness for school. Perhaps the most influential aspect of these theoretical models is the view that children's development occurs in context, and that relationships between children and the environments in which they evolve are critical in determining outcomes. A dynamic transactional relation between child and context is posited, in which both are constantly being changed by their experience with each other (Sameroff & Fiese, 2000a). An ecological perspective reminds us that children take part in a number of social systems that have the potential of influencing their development, including their family, peers, school, neighborhood, and the wider community. These various factors are seen as cumulative contributors to a positive or negative trajectory through life. As such, child competence in various domains is seen as the "result of a complex interplay of children with a range of personalities in different kinds of families in communities with varying economic and social resources" (Sameroff & Fiese, 2000a, p.5). Only by attending to such complexity can the emergence of competence and maladjustment be understood adequately.

A few large-scale studies have made an attempt in this direction by investigating a number of influences on children's cognitive and social-emotional development. The Rochester Longitudinal Study (Sameroff, Bartko, Baldwin, Baldwin, & Seifer, 1998; Sameroff, Seifer, Barocas, Zax, & Greenspan, 1987) examined the effects of environmental factors over time on the development of several hundred children from birth through adolescence. Sameroff and his colleagues assessed a set of 10 environmental variables as well as the cognitive and mental health of the children when they were 1, 4, 13, and 18 years of age. The 10 predictor variables were: (1) a history of maternal mental illness, (2) high maternal anxiety, (3) a rigid and punitive child-rearing style, (4) few positive maternal interactions with the child observed during infancy, (5) head of household in unskilled occupation, (6) minimal maternal education, (7) disadvantaged minority status, (8) reduced family support, (9) stressful life events, and (10) large family size. These environmental risk factors were selected to represent a range of influences, from proximal variables that were directly experienced by the child, to distal ones that could only have indirect effects. One of the important conclusions drawn from this study was that while there were significant effects for some of the single risk factors examined, it was the accumulation of risk conditions that was the prime determinant of children's outcomes. The multiple-risk score that was calculated for each child based on the set of environmental risk factors was highly correlated with child mental health at age 4, and again when children turned 13 and 18 years old (Sameroff, 2000; Sameroff et al., 1998). Similar findings highlighting the cumulative effect of multiple environmental risks

on developmental trajectories emerged from a large study of adolescents in Philadelphia (see Furstenberg, Cook, Eccles, Elder, & Sameroff, 1999).

Together, this body of work on the ecology of children's development points to the importance of examining a range of individual characteristics and social influences when studying various facets of competence. Although this conceptual approach has clear implications for the study of children's school readiness, little research on this topic has been presented to date. The current study represents an attempt to apply the ecological model to the understanding of children's school transition. The goal herein is to identify the range of potential risks and opportunities that children face during this critical period in their development, and to explore the mechanisms through which these factors affect child competence.

Risk and Opportunities During The Early Childhood Years

Drawing from the work of Bronfenbrenner (1986) and Garbarino (see Garbarino & Ganzel, 2000), social influences on school readiness are examined at four different levels within the present study, while not losing sight of the important role of child characteristics. In the sections to follow, the factors explored in the current research are reviewed, including child readiness indicators, parenting, parental hardship, home context, and school context.

Child readiness indicators. As previously mentioned, most of the research to date on child characteristics predictive of school performance has focused on cognitive factors. Yet, other skills are also important in predicting school adjustment during the early grades, given that competence during this period involves becoming an autonomous and

sociable learner. As such, social behavioral skills must be considered in predictions of school readiness. Children's social behavior can be differentiated between their work-related and interpersonal skills, both of which contribute to their learning competence (Cooper & Farran, 1988, 1991; McClelland, Morrison, & Holmes, 2000). Work-related skills tap the domains of independence, self-regulation, attention, and cooperation, and encompass behaviors such as listening and following directions, taking turns, staying on task, and organizing work materials (see McClelland et al., 2000). Children who can identify the problem to be solved, plan strategically, monitor routines, and evaluate outcomes are more likely to perform required tasks systematically, without needing constant assistance from their teacher (Flavell, 1987; Meichenbaum & Biemiller, 1990; Moss, Parent, Gosselin, & Dumont, 1993; Normandeau & Guay, 1998; Parent & Moss, 1994). The ability to allocate sustained attention to the task at hand, regulate negative emotions, and delay gratification also assist children in organizing and carrying out their problem-solving (Bowman, 1999; Feldman & Wentzel, 1990; Flavell, Miller, & Miller, 1993; Howse, 1999; Shields et al., 2001; Wentzel, Feldman, & Weinberger, 1991). Individual differences in work-related skills have been shown to predict strategy acquisition and overall learning capacity in school (Borkowski, Carr, Rellinger, & Pressley, 1990; Meichenbaum & Biemiller, 1990). In fact, Gumora (2001) demonstrated that students' ability to manage the anxiety and frustration associated with routine school tasks predicted their grade-point average above and beyond cognitive ability.

In parallel, children's behavioral/interpersonal skills also contribute to adaptive success in school. Interpersonal skills include behaviors such as interacting positively

with peers, playing cooperatively, sharing, and respecting other children. Prosocial tendencies relate to positive social and scholastic outcomes during early elementary school (e.g., supportive peer relationships, classroom participation; Ladd, 1996; Ladd & Price, 1987). In contrast, antisocial styles such as aggressivity and proneness to fighting predict school maladjustment, including avoidance, peer rejection, academic underachievement, and conduct problems (Birch & Ladd, 1998; Gagnon, Craig, Tremblay, Zhou, & Vitaro, 1995; Janosz et al., 1997; Ladd et al., 1999; Ladd & Price, 1987; Parker & Asher, 1987). Within a general population sample of close to 2,000 Quebec children followed from kindergarten up to age 11, Masse and Tremblay (1999) demonstrated that disruptive behavior in kindergarten significantly increases the likelihood of both school failure and placement in special classes during the elementary school years.

The research reviewed here suggests that children's social behavioral competence needs to be considered in addition to their cognitive skills when studying success during the transition to school. Interestingly, when asked to describe child attributes that are most critical to school readiness and successful transition during the early grades, teachers often place more emphasis on children's maturity and social development than on mastery of basic cognitive skills (Zill, 1999). Teacher ratings of children's classroom behavior are positively related to academic achievement over time (Alexander, Entwisle, & Dauber, 1993; Green & Francis, 1988), and predict promotion and retention of children (Agostin & Bain, 1997), suggesting that teachers represent accurate judges of key developmental precursors of school success.

When considering child attributes that bear on school adaptation, the issue of gender also deserves attention. A large body of evidence suggests that boys may be at elevated risk for cognitive and behavioral problems (e.g., Alexander & Entwisle, 1988; Serbin, Peters, & Schwartzman, 1996; Serbin, Cooperman, Peters, Lehoux, Stack, & Schwartzman, 1998), and that they may encounter more difficulties meeting the expectations of the school setting. In fact, results from national assessments of children's school achievement consistently indicate that girls tend to outperform boys in a number of areas (see Pellegrini & Blatchford, 2000; Sammons, West, & Hind, 1997).

A host of different factors have been examined as potential explanations for the gender difference in scholastic success (for a review of studies, see Pellegrini & Blachford, 2000). First, a number of child characteristics appear to impact on boys' and girls' ability to adapt to the demands of school. Empirical work indicates that girls are generally more attentive in class, and that this greater attention and concentration is positively related to achievement and progress (Arnot, Gray, James, & Ruddock, 1998). Girls are also more likely than boys to engage in homework and do this more conscientiously than boys (Harris, Nixon, & Ruddock, 1993). In addition, differences in motivation and attitudes toward school may be involved in the higher achievement levels of girls. Marsh and colleagues (1991) found that boys have higher self-concepts than girls in the areas of mathematics, physical appearance, and physical abilities, while girls have higher self-concepts in areas of reading and general school aptitude, which may bear more heavily on academic performance.

Beyond the impact of within-child factors, other factors may contribute to gender differences in school success. These include curriculum content and the way subjects are taught, as well as expectations and behaviors from teachers. Teachers generally pay more attention to the behavior of boys (Howe, 1997), and tend to perceive more disruptive attitudes in boys than in girls. These negative views have the potential of affecting the quality of instruction provided to boys over time. One school of thought emphasizes social roles and socialization practices as critical underpinnings of the gender difference in children's school aptitude (Croll & Moses, 1990; Stanworth, 1981); yet little empirical work has been conducted to address this hypothesis.

Parenting. Moving from consideration of the impact of child characteristics on school adaptation, the social contexts in which children are embedded are also viewed as critical in the model of school readiness proposed in this research project. In particular, parents are thought to represent a powerful influence on children's learning, both prior to school entry and beyond. Parents have the opportunity to organize family life and the home environment in ways to offer diverse learning experiences to their children, as well as pass on specific knowledge and problem-solving strategies (Alexander & Entwisle, 1988; Barth & Parke, 1993, 1996; Cowan, Cowan, Heming, & Miller, 1992; Cowan et al., 1994). As such, they are often considered to represent their offspring's first and most important teachers (Pianta, 1997; Scott-Jones, 1987). Most parents appear to be aware of this influence, and accept the responsibility of preparing their children for school (Holloway, Rambaudo, Fuller, Eggers-Pierola, 1995).

Over the past few decades, as a result of women's greater participation in the labor force, children began to spend considerable amounts of time away from the family in the years before school in some form of child-care arrangement. Researchers have become interested in the impact of daycare participation on children's socio-emotional development and school readiness. The data emerging from this line of research have generally yielded positive results: children who participate in group care generally appear more advanced than children at home on measures of school readiness and adjustment, cognitive competence, classroom skills, and behavioral conduct (for reviews of studies, see Caughy, DiPietro, & Strobino, 1994; Christian et al., 1998). Although early group experiences outside the home are recognized to contribute to children's preparedness for school, in the current study the focus was on experiences within the family that could influence the school readiness of vulnerable children.

After decades of research, it is now clear that parent-child relationships and dyadic interactions represent proximal environmental variables that can directly affect young children's learning and overall development. Although a comprehensive review of the attachment literature is beyond the scope of the current report, it is important to note that the large body of work on attachment attests to the importance of early relationships between children and their caregivers in predicting their long-term adjustment and well-being (for reviews, see De Ruiter & Van Ijzendoorn, 1993; Turner, 1993). In parallel, during the toddler and preschool years, parents can engage their offspring in teaching interactions that promote the acquisition of increasingly complex thinking patterns and problem-solving skills (Meadows, 1993, 1996; Olson, Bates, & Kaskie, 1992; Rogoff,

1990). Vygotsky (1978, 1987) proposed a socio-cultural model of cognitive development and learning that emphasized the primacy of the social world, and suggested that children incorporated strategies and skills used during dyadic interactions with more skilled partners through a process of gradual internalization (Pratt, Kerig, Cowan, & Cowan, 1988). In Vygotsky's model, adult guidance is thought to be most beneficial when it is geared towards the developmental level and current abilities of the child. As such, optimal parental stimulation has been described as consisting of warm, sensitive, and contingent teaching (Rogoff, 1990). Specifically, the adult needs to provide sufficient tutoring in order for the child not to be overwhelmed and to succeed at the task (Berk & Spuhl, 1995; McNaughton & Leyland, 1990). As the child becomes more knowledgeable and skilled, however, the adult should gradually reduce his or her support, and let the child take over more of the planning and execution aspects of the task (Meins, 1997a, 1997b; Pratt et al., 1988; Rogoff, 1990).

This form of contingent and sensitive adult teaching, often referred to as "scaffolding" (Wood, 1980), has been shown to contribute positively to children's cognitive competence, work-related skills, and self-regulation abilities (Barocas et al., 1991; Berk & Spuhl, 1995; Moss, 1992a, 1992b; Moss et al., 1993; Neitzel, 2001; Parent & Moss, 1994; Pratt, Green, MacVicar, & Boutrogianni, 1992). Early school success is also related to the quality of these mother-child teaching exchanges. The work of Pianta and colleagues (Pianta, 1997; Pianta, Erickson, Wagner, Kreutzer, & Egeland, 1990; Pianta & Harbers, 1996; Pianta, Smith, & Reeve, 1991) suggests that aspects of early mother-child interactions, in particular the extent to which it is structured for mastery

and the degree to which the interaction is pleasant and warm, represent good predictors of children's academic achievement in the early grades. This suggests that both the teaching and emotional aspects of scaffolding interactions are beneficial to children's development over time. Pianta and his colleagues also demonstrated that preschool-age measures of mother-child interaction were more predictive of special education referrals in school than were results of standardized developmental tests (see Pianta et al., 1990).

In parallel, qualities of the early mother-child relationship are also related to children's social and interpersonal skills, and as such may affect the quality of subsequent relationships formed with peers and teachers (Hamilton & Howes, 1992, Patterson, Cohn, & Kao, 1989; Parke & Buriel, 1998; Pianta et al., 1997). In a longitudinal study evaluating the effects of early dyadic interactions on later child social skills, Steelman, Assel, Landry, Swark, and Smith (2001) indicated that maternal warm responsiveness had a direct effect on children's subsequent social abilities, controlling for the effects of maternal discipline. It has been suggested that children tend to apply models of behavior developed in interactions with their primary caregivers to their interactions with new social partners in the school setting, in particular to their relationship with their teachers (e.g., Barth & Parke, 1996; Dopkins Stright & Paul, 2001). A growing line of research focuses on the importance of the teacher-child relationship in determining children's school adjustment (Birch & Ladd, 1996, 1997; Pianta & Steinberg, 1992; Pianta et al., 1995). Given the links between the quality of early interactions and children's subsequent academic and social/behavioral functioning, it appears clear that early dyadic interactions are critical in promoting children's overall readiness for school.

Parents' disciplinary style represents another powerful influence on children's developing competence. Past research has indicated that parental induction and power assertion are two prominent forms of discipline that have consistent links with children's social and behavioral adjustment during the preschool years and following school entry (see Hart, DeWolf, Wozniak, & Burts, 1992). Parents who rely on inductive discipline use reasoning to make children aware of inappropriate behavior and its consequences. This is done by limit setting, setting up logical consequences, explaining, and eliciting ideas from the child. In contrast, power assertive discipline (e.g., scolding, material and physical consequences for bad behavior) may serve to model aversive behavior as an effective means of resolving interpersonal issues with others (Barth & Parke, 1996). Parents' discipline style has been shown to relate to children's behavioral style over time, as well as to their popularity and acceptance from peers (Hart et al., 1992).

In parallel to the quality of direct parent-child exchanges, children benefit from parent provision of support, structure, and stimulation in the home during the toddler and preschool years. Home environments conducive to learning and literacy include a number of positive characteristics, such as safety and organization, parental emotional responsiveness, language stimulation, and cognitive richness, as measured by the presence of stimulating toys and learning materials (Bradley & Caldwell, 1984a, 1984b; Caldwell & Bradley, 1984; Halpern, 1990). These aspects of a stimulating home environment are linked to the family's socioeconomic resources (Lee & Croninger, 1994). The availability of support and stimulation in the home environment contributes positively to children's cognitive and socio-emotional growth, and assists them in their preparation for formal

schooling (e.g., Aksu-Koc, 1992; Bradley et al., 1989; Bradley & Rock, 1985; Campbell & Ramey, 1994; Egeland, Carlson, & Sroufe, 1993; Molfese, DiLalia, & Lovelace, 1996). Data from approximately 2,000 children from the National Longitudinal Survey of Youth revealed that the overall quality of the home environment represents a positive predictor of individual differences in the verbal intelligence of children between the ages of 3 and 8 (Luster & Dubow, 1992). In this large-scale study, a statistically significant relation was found between home environment and child IQ, even after the effect of maternal IQ was controlled.

Following children's transition into the school system, parents can continue to engage in behaviors that exert an influence on their offspring's learning competence. Specifically, they can continue to involve their children in stimulating and supportive interactions, and they can provide assistance in completing homework exercises. As well, parents can promote their children's learning by establishing positive working relations with teachers and getting involved in school activities (Epstein, 1996; Rogala, 2001). This type of parent-school involvement is associated with a range of positive child outcomes, including higher academic achievement in elementary school (Bempechat, 1990; Midgett & Midgett, 2001; Reynolds, 1989; Stevenson & Baker, 1987; Taylor, Hinton, & Wilson, 1995; Zellman & Waterman, 1998), fewer behavior problems (Colbert & Hegland, 1999), and lower rates of high school dropout (Miedel & Reynolds, 1999).

Parental hardship. From the above description, it is clear that parents have a critical role in preparing their children for the challenges of formal schooling. Parents' ability to foster the learning competence of their offspring is dependent upon their own

emotional, intellectual, and material resources. As such, parents' psychosocial and psychological functioning must be perceived as a critical, albeit indirect, influence on children's school readiness.

For instance, parents' educational attainment, as a function of its association with intellectual ability, knowledge about child rearing, and socioeconomic status, influences the stimulation, availability, and support provided to offspring (Luster & Dubow, 1992). Education may contribute to an increased emphasis on academic goals, and to efforts made by parents to assist their youngsters in achieving these goals. For instance, mothers who are better educated are more likely to have stimulating materials in the home and to use these materials in a way that is beneficial to the child (Furstenberg, Brooks-Gunn, & Morgan, 1987). The results of several studies indicate that parental education is linked to developmental outcomes in offspring, including cognitive skills and school achievement (Katz et al., 1997; Serbin et al., 1998; Velez, Johnson, & Cohen, 1989).

Other aspects of parents' personal history and current life conditions affect their ability to mobilize the material and emotional resources that are deemed necessary for promoting their children's school readiness. A large body of work consistently demonstrates the negative effect of maternal depression on the quality of mother-child interactions and the development of young children (see Brody & Flor, 1997; Goodman & Brumley, 1990; Webster-Stratton & Hammond, 1988). In parallel, mothers dealing with the consequences of teenage or single parenthood, limited social support, parenting stress, and overall emotional distress are also less able than other mothers to cope with their parenting responsibilities (Bloomquist, Joyce, & Harste, 2001; Simons, Lin, Gordon,

Conger, & Lorenz, 1999). In a low-income sample that included preterm and full-term children, Assel and colleagues (2001) indicated that maternal emotional distress was associated with less warmth and flexibility in interactions with preschool-age children. As part of the Mother-Child Interaction Project, Pianta and colleagues (Pianta & Ball, 1993; Pianta & Egeland, 1990) showed that in families where mothers reported elevated levels of stress and insufficient social support, mother-child interactions became progressively more negative over time, marked by disengagement and avoidance on the part of the child. In turn, children's adjustment in kindergarten was affected by maternal hardship, controlling for SES, child intelligence, and developmental problems (see Pianta & Ball, 1993). Together, this data suggests that children of individuals experiencing psychosocial hardship may be deprived of critical support in their progressive preparation for the demands of formal schooling.

Home context. In addition to parental characteristics, home context represents another indirect influence on the resources made available to young children facing the challenges of school transition. For instance, children growing up in financially disadvantaged families are generally exposed to households with fewer material and emotional resources. The adverse effects of socioeconomic disadvantage (including low income and low occupational prestige) on children's physical, cognitive, emotional, and behavioral functioning have been well documented (e.g., Ackerman, Izard, Schoff, Youngstrom, & Kogos, 1999; Brooks-Gunn & Duncan, 1997; Duncan, Yeung, Brooks-Gunn, & Smith, 1998; McLoyd, 1998; Miech, Caspi, Moffitt, Entner Wright, & Silva, 1999). Underscoring the negative impact of poverty on school outcomes, Pagani,

Boulerice, and Tremblay (1997) established a connection between poverty and severe academic underachievement. In a sample of close to 2,000 boys and girls attending francophone schools in several regions across the province of Quebec, it was concluded that children who had experienced chronic poverty ran almost twice the risk of being placed out of an age-appropriate regular classroom by the time they reached age 12.

Despite the compelling conclusions emerging from this line of research, the implications of this work have been hampered by the fact that the intermediate connections explaining the association between socioeconomic disadvantage and child outcomes have often been neglected (Dodge, Pettit, & Bates, 1994). It is important to recognize that low SES produces a number of circumstances known to jeopardize parents' ability to optimize the development of their children (see Cooperman & Serbin, 1998; McLyod, 1998). For instance, in the context of socioeconomic disadvantage, children are more likely to be exposed to difficult life conditions including inadequate nourishment and health care, sub-standard housing, and unsafe neighborhoods, all of which place children at risk (Osofsky, 1995; for a review of studies, see Cooperman & Serbin, 1998). Lower SES also tends to co-occur with increased rates of marital problems and single-parent families, which render more likely social isolation and parenting stress (Halpern, 1990; Skinner, Elder, & Conger, 1990; Takeuchi, Williams, & Adair, 1991). A lack of social support in raising young offspring threatens the emotional and physical resources that are made available to them (Cochran & Niego, 1995; Goldstein, Diener, & Mangelsdorf, 1996; Szykula, Mas, Turner, Crowley, & Sayger, 1991). Thus, in order to fully understand the ways in which the home socioeconomic context bears on child

outcomes, it is important to consider its impact on parenting practices and other proximal predictors of child competence (Raviv, Kessenich, & Morrison, 2001; for a review of studies, see Aber, Jones, & Cohen, 2000).

School context. The various direct and indirect ways in which the family system bears on children's school readiness should not obscure the powerful impact of another social system in which children are embedded at the beginning of formal education, that of the school (Barth & Parke, 1996). Children's learning is strongly influenced by the educational context in which it occurs. Lee (2000) argued that when children are very young, the family is the major context for learning. As they grow, their educational activities occur increasingly in more formal settings. As such, it is critical to consider characteristics of the school as an important factor when studying children's adjustment in this setting.

A number of researchers have recently begun to explore the socioeconomic composition of the school and its link with students' individual achievement (Caldas & Bankston, 1997, 1999; Ma & Klinger, 2000). The rationale for this line of research is that schoolmates, by virtue of their family background, create their own social context, independent of any individual's own background. Taken together, the backgrounds that students bring to school contribute to the creation of a "peer culture." This may affect the quality of education that all pupils receive, by the mere concentration of the student body that has certain levels of preparation, standards of performance, or attitudes towards learning in general (Caldas & Bankston, 1999). These characteristics of the student body may influence the expectations of teachers and the quality of instruction provided. In

addition, students' backgrounds may determine the extent of parental involvement in school life. For example, in schools with many children from disadvantaged families, parents may have less time and fewer financial resources to organize fundraisers, get involved in extra-curricular activities, and assist teachers in outings. Recent research has demonstrated that the average SES of a school has as great an effect on academic achievement as an individual student's SES (see Caldas & Bankston, 1997; Ma & Klinger, 2000). Such findings provide valuable insights concerning characteristics of effective schools, and begin to suggest that schools are products of the social milieus that provide them with students.

Although intriguing, the data currently available focuses almost exclusively on the prediction of children's academic outcomes, and more research is required to examine the impact of school SES on other aspects of children's functioning during the early grades. In addition, there is a need to explore in greater depth how socioeconomic disadvantage at the level of the school can affect the learning of individual students. Physical aspects of classrooms, playgrounds, and school buildings may represent one underlying mechanism. Alternatively, the experiences and extracurricular activities made available to children in schools from various sociodemographic backgrounds may also be involved in determining their individual growth (Sammons et al., 1997).

A High-Risk Longitudinal Design for the Study of School Readiness

The literature reviewed here on the multiple sources of influence on children's school readiness highlights the complexity of this phenomenon. To date, most of the research aimed at explaining children's learning competence at school age has fallen short

of providing a comprehensive understanding of the mechanisms and pathways through which a range of individual characteristics and social systems combine to predict school outcomes. A number of methodological and design issues may have hampered past research efforts.

Importantly, past research has tended to study predictors of school adjustment independently rather than considering multiple factors jointly. Although this approach has led to the identification of a number of correlates of children's adaptation to school, it has also contributed to a fairly simplistic and static view of social influences on school adjustment (see Cowan et al., 1994; Ladd, 1996). In particular, research examining the relations between the family system and school outcomes has suffered from "contextual myopia," tending to consider a narrow range of family variables (Cowan, Cowan, & Heming, 1989). As a result, the processes and mechanisms through which family context influences children's adaptation to school have been neglected. Clearly, insight into how various child characteristics and environmental factors combine or interact to produce higher or lower levels of school readiness cannot be achieved by studying predictors in isolation.

Most of the current literature can also be faulted for examining important influences on school adjustment in the context of cross-sectional designs rather than longitudinal ones (Barth & Parke, 1996; Cowan et al., 1994). Yet, throughout the course of infancy and early childhood, children are likely to encounter situations and be involved in relationships that together bear on their developing competence. As suggested by Barth and Parke (1996), concurrent analyses that rely on a "snapshot" of social influences

on school readiness fall short of describing the pathway through which school adjustment emerges over the course of early childhood. Consequently, an adequate understanding of child readiness requires that studies assess important predictors prior to school entrance and continue to do so in the context of the school setting. Such longitudinal research examining comprehensive, multidimensional models of children's readiness for school is rare, however (for notable exceptions, see Barth & Parke, 1993; Cowan et al., 1989; Cowan et al., 1994).

Finally, efforts to identify the precursors of children's early school adjustment have often focused on normative samples of youngsters (e.g., Alexander & Entwisle, 1988; Pianta, Smith, & Reeve, 1991). It is unclear whether the conclusions drawn from these types of studies can readily be applied to groups of children who are at elevated risk for developmental and/or learning problems. Yet, understanding early school adjustment within economically disadvantaged and other high-risk populations is critical. In these communities, there is an elevated risk of school failure and long-term psychosocial problems, combined with wide variability in outcomes and functioning (Smith, Brooks-Gunn, & Klebanov, 1997). Currently, our knowledge of the specific predictors of the early school transition of high-risk children is fairly limited. In order to design effective preventive strategies, the environmental experiences and child characteristics that stimulate learning competence and buffer youngsters from the effects of high-risk backgrounds must be identified (Rutter, 2000; Werner, 2000).

The Concordia Longitudinal Risk Project

The present study is designed to address some of the limitations mentioned above, and proposes a comprehensive depiction of the progressive process of school readiness within a population vulnerable to psychosocial and learning problems. This research is based on data from the Concordia Longitudinal Risk Project, a prospective, longitudinal study of individuals considered at risk for continuing hardship and adversities. This investigation was begun in 1976, with the selection of school-aged children from inner-city, lower SES neighbourhoods of Montreal, Quebec. As a function of aggressive and socially withdrawn tendencies exhibited in early childhood, a significant proportion of the participants in this study have struggled to face important developmental transitions over time. Poor school achievement and attainment, as well as early parenthood represent a few of the important challenges that have faced some of the participants with childhood risk profiles as they evolved into adolescence and adulthood (Moskowitz & Schwartzman, 1989; Serbin, Moskowitz, Schwartzman, & Ledingham, 1991; Serbin, Peters, McAffer, & Schwartzman, 1991).

Recent follow-up studies examining the functioning of participants who have become parents suggest that their adverse psychosocial histories affect the conditions under which they raise their offspring. Indications of an inter-generational transfer of risk have also begun to emerge (Bentley, 1997; Cooperman, 1996, 1999; Karp, 2000; Saltaris, 1999; Saltaris et al., 2002; Serbin et al., 1998; Serbin, Peters, et al., 1991). The most recent phase of the Concordia investigation consisted of an in-depth study of family functioning in the home, focusing on the prediction of competence in toddlers and

preschoolers, aged 1 to 6 years (Serbin, Stack, & Schwartzman, 2000; Serbin et al., in press). The total sample included 175 families. By focusing on the period of early childhood, the goal was to gain a greater understanding of risk and protective factors, from the pre- and peri-natal periods through the first five years of life, that could help predict children's functioning in a population known to be at elevated risk.

Through this latest phase of the project, support was provided for the continuing risk status of the Concordia sample. Although participants evidenced a range in functioning, the families included in the study on average fell below population norms on several important measures of psychosocial adjustment, including educational attainment and family income. At the time the children were toddlers and preschoolers, approximately 19% of the sample was dependent on government social assistance (i.e., receiving welfare) and an additional 29% of the families were considered to be "working poor," given that their annual income fell below the Canadian low-income cutoff (CLICO; Center for International Statistics, 1997). As a function of the past and current adversities they faced, participating parents struggled to provide the material and emotional resources that could promote the early development of their offspring. For instance, marked differences in the quality of the home environment and mother-child interactions were established as a function of parental risk status. The offspring in this study also exhibited early markers of psychosocial and developmental difficulties. Evaluations of the children's overall developmental progress by licensed psychologists indicated that approximately 60% of the 175 offspring experienced developmental and/or behavioral problems at the time of the investigation. A number of these children (36%)

were experiencing problems in multiple domains of functioning, including cognitive delays, family problems, and behavioral difficulties.

Taken together, the findings that emerged from this latest phase of the Concordia project indicated that the children taking part in this investigation were confronted with multiple factors threatening their developing competence. The accumulation of risks at the individual, family, and contextual levels suggested an increased likelihood of continuing difficulties over time, including academic and social problems in the school context (Serbin et al., 2000; Serbin et al., in press). As these children recently made their entry into school, an opportunity was provided to examine longitudinally their adjustment during the critical period of school transition.

Introduction to the Present Study

The purpose of the present study is to explore the competence of high-risk children as they make their transition into school and face the multiple challenges of becoming autonomous and sociable learners in an unfamiliar context. A comprehensive perspective on children's school functioning is presented, including their academic performance, work-related skills, and behavioral/interpersonal style. The current phase of the Concordia project addresses the roots of academic and social competency, and traces, from infancy onward, the trajectories involved in the attainment of educational success or failure within a high-risk population. More specifically, the present investigation is divided into three sections. In the first part of the study, links between early child characteristics and abilities and various aspects of school competence are explored. In Part II, the focus is on the ability of high-risk parents to foster the learning competence of

their school-age offspring. Finally, in Part III, an ecological model of school readiness is tested that emphasizes the additive contribution of child, family, and contextual factors in the development of children's learning competence. In considering broad contextual influences and more proximal correlates of children's learning during the early grades, direct and indirect pathways towards school readiness are charted.

Within this doctoral dissertation, the three parts of the investigation on children's school readiness are described as different sections of a manuscript, which is presented next. The manuscript includes an introduction and a method section, as well as three result sections, each including relevant background work, the plan for data analysis, a summary of empirical results, and a brief discussion of findings. A general discussion of the three parts of the research project, along with implications of the current work and directions for future research, are presented following the manuscript. This thesis format was deemed useful to facilitate the publication process following the acceptance of the dissertation.

RUNNING HEAD: PREDICTING SCHOOL ADAPTATION

Predicting school adaptation during the early grades:

An ecological study of high-risk children

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Predicting school adaptation during the early grades:

An ecological study of high-risk children

Within high-risk and disadvantaged populations, the experience of adversity and hardship tends to be stable over time and across generations. Vulnerability to psychosocial maladjustment and psychological distress is often transferred from parent to child through a complex interplay of genetic, biological and environmental factors, contributing to a fairly entrenched intergenerational cycle of risk. Despite the poor prospects for many individuals from high-risk backgrounds, there is also a range of outcomes in terms of adaptation and competence across the lifespan. In fact, some children who are considered vulnerable to adversity in view of their disadvantaged backgrounds or the functioning of their parents grow up to become productive members of society (Rutter, 2000; Werner, 2000; Werner & Smith, 1992).

The probabilistic nature of risk highlights the critical importance of understanding the processes, pathways, and turning points underlying the transfer of psychosocial problems across generations. It is essential to identify the personal characteristics and environmental experiences that may increase the vulnerability, or alternatively protect, children who are expected to encounter continuing hardship. As suggested by Rutter (1998), this type of information is required to facilitate the development of effective preventive interventions aimed at breaking intergenerational cycles of risk.

The findings from several longitudinal investigations of high-risk populations suggest that education represents an important factor in the development of vulnerable individuals as well as a critical turning point in the process of intergenerational risk

transfer (e.g., Caspi, Elder, & Bem, 1988; Katz et al., 1997; Serbin et al., 1998). Children from high-risk backgrounds struggling to meet the demands of school and achieving limited educational attainment tend to face continuing hardship over the life course. These individuals are at elevated risk for low occupational status and income, as well as increased life stressors and personal distress such as early parenthood, alcohol and drug use, and involvement in various delinquent and criminal activities (Cairns et al., 1989; Ronka, Pulkinnen, & Kinnunen, 1999). In contrast, high-risk children who fare better in terms of educational outcomes generally exhibit improved health, occupational, and psychosocial functioning over time, thereby drifting away from the path of disadvantage and adversity (Werner & Smith, 1992).

Given that educational achievement represents a potential protective factor in the life course trajectory of high-risk children, understanding the roots of learning competence and school success has clear implications for the promotion of the development of the most vulnerable children in our society. The early elementary grades are viewed as a critical period in the establishment of basic cognitive, behavioral, and social skills that determine subsequent adjustment to school and long-term attainment (Alexander & Entwisle, 1988; Belsky & MacKinnon, 1994; Birch & Ladd, 1998). Findings from several empirical studies of normative and high-risk groups of children have demonstrated that grades and patterns of behavior in the first few grades represent important determinants of subsequent school outcomes, thereby underscoring the consistency in children's school adjustment over time (e.g., Ensminger & Slusarcick, 1992; Janosz et al., 2000). As such, understanding the most important determinants of

early school adjustment among high-risk children is critical, from the perspective of research, practice, and social policy.

In recent decades, investigations of the best predictors of early school outcomes within high-risk populations emphasized poverty and severe disadvantage as major risk factors for academic underachievement (e.g., Smith et al., 1997). This line of research was prompted by sharp increases in rates of childhood poverty in North America, including the United States and Canada, since the 1970's (see Huston, McLyod, & Coll, 1994; McLyod, 1998). In 1994, 22% of U.S. children lived under the poverty line (U.S. Bureau of the Census, 1996), while in Canada 19% of children under age 18 and 21.3% of children under age 7 lived in poor families (Human Resources Development Canada [HRDC], 1997). Children less than 6 years of age appear to be at higher risk of being poor than are children ages 6 to 17, largely because their parents are younger and command lower wages. Some parents with preschool-age children have difficulty finding affordable daycare, and thus raise their children at home while depending on governmental assistance (Bronfenbrenner, McClelland, Wethington, Moen, & Ceci, 1996). These alarming poverty figures have led to a surge of research and scholarship on the development of poor children in general and specifically on their readiness for school. From this work, it has become clear that long-term economic deprivation indeed places young children at elevated risk for school problems and academic failure as they make the transition into the early grades (for reviews, see Duncan & Brooks-Gunn, 1997; Duncan, Yeung, Brooks-Gunn, & Smith, 1998; Korenman, Miller, & Sjaastad, 1995; McLyod, 1998).

Although these findings have clear and important implications, the focus on extreme economic disadvantage as a predominant risk factor for children's school problems can be considered misleading in various ways. First, a growing number of researchers and scholars contend that poverty itself may not directly cause negative outcomes for children (e.g., Brooks-Gunn, Duncan, & Maritato, 1997). Rather, family and environmental conditions that often co-occur with poverty might account in large part for the association between low income and poor child outcomes. Poor families are more likely to be headed by young or single parents, parents with low educational attainment, and unemployed parents or ones with low-wage occupations. Poor prenatal care, family instability, and isolation are also common among families living in poverty (Garrett, Ng'andu, & Ferron, 1994), and have all been shown to threaten many aspects of child development (Huston et al., 1994). As such, research on the development and functioning of high-risk children in various domains, including their school adaptation, needs to include a focus on the processes and pathways through which environmental disadvantage affects child outcomes.

In parallel, greater insight into the challenges facing high-risk families could be gained from broadening the definitions of disadvantage and risk. The majority of existing research on vulnerable children has been conducted within the United States and has focused on samples of inner-city, extremely disadvantaged, minority families (e.g., Head Start Project, Barnett, 1995). This work has been instrumental in demonstrating that children who experience persistent deprivation, who live in areas of concentrated poverty, and who face racial or ethnic discrimination are most at risk of developmental

and school problems. Yet, other children who are not exposed to such extreme conditions also face challenges in their early development. In particular, children in families facing transient unemployment, and those whose earnings are restricted despite the fact that one or both parents are employed, may be affected. Over the past two decades, the steady decline in manufacturing industries has led to a significant loss of low-skill, high-wage jobs in North American countries (see McLyod, 1998). This new socioeconomic reality has confronted many individuals with minimal professional training to unstable, low-wage occupations. As a result, in recent years, the proportion of “working poor” families has consistently increased (HRDC, 1997). In a recent memoir focusing on the fight against poverty in Quebec (Conseil de la famille et de l'enfance, 2001), the provincial government recognized that future social programs needed to address the particular challenges facing “working poor” families, as this group represents a greater proportion of our population than individuals living in extreme poverty.

In keeping with more complex and dynamic conceptions of disadvantage and risk, contemporary research on the school competence of vulnerable children needs to consider the combination of child, family, and contextual factors that are involved in pathways towards risk and resilience. An ecological approach (Bronfenbrenner, 1986; Garbarino & Ganzel, 2000) that takes account of influences at multiple levels of proximity to children, from more distant factors such as neighborhood and school context, to more proximal influences such as family environment and child characteristics, is likely to yield the greatest insights into the development of high-risk youngsters.

The current investigation adopted an ecological approach to the study of the early school adaptation of children considered at risk of learning and behavioral difficulties. In contrast to many existing studies focusing on school success within U.S. samples of inner-city, minority children, this research project explored the processes involved in school readiness from infancy to the early grades within a more heterogeneous group of families. The overall objective of the investigation was to come to a greater understanding of the interplay of child, family, and contextual factors that are involved in the attainment of educational success and failure in children from moderate to high-risk backgrounds.

The present study was part of the work conducted within the Concordia Longitudinal Risk Project, a prospective, longitudinal investigation of high-risk individuals that was begun over 25 years ago (Schwartzman, Ledingham, & Serbin, 1985; Serbin et al., 2000). At the time, a group of 1,770 children were selected for participation based on an additive risk model. The children attended grades 1, 4, and 7 in elementary schools located in lower-SES neighborhoods of Montreal, Quebec. In addition to their disadvantaged backgrounds, approximately half of the pupils exhibited extreme aggressive and/or socially withdrawn tendencies, as rated by their classroom peers. Aggression and social withdrawal in childhood have been shown to represent risk factors for long-term psychosocial adjustment and psychological well-being (Caspi et al., 1988; Zoccolillo, Pickles, Quinton, & Rutter, 1992).

Over time, the participants from the Concordia project have come to exhibit a wide range of functioning and adjustment. While some of the high-risk individuals from the project have followed a pathway of persistent adversity and hardship, marked by

elevated rates of criminality and mental illness (Schwartzman, Moskowitz, Serbin, & Ledingham, 1990), other participants have appeared more resilient. As a group, the high-risk individuals who have formed families may represent a sub-sample with greater resources. The fact that these men and women sought to establish a family unit suggests that their interpersonal skills were perhaps better developed than those of more isolated individuals. In addition, the family of procreation may represent a source of financial and emotional support for the individuals initially considered at risk for continuing hardship.

Nevertheless, recent research findings on the adjustment of parents from the Concordia project indicated that their personal history of hardship and disadvantage negatively affected the parenting context provided to their offspring, the quality of parent-child relationships, and the early development of the next generation (see Saltaris et al., 2002; Serbin et al., 2000). As a function of their family background and their early developmental difficulties, the offspring of Concordia participants were considered to represent a group of children at elevated risk for continuing adjustment problems, including difficulties in making the transition to school.

A number of issues regarding the learning competence and early school adjustment of high-risk children were examined in the current investigation. The overall objective was to examine risks and protective factors that could explain children's functioning during this critical period. First, an attempt was made to understand how vulnerable children fare in adapting to the challenges of the early school grades, and how their functioning during the toddler and preschool period, measured as their cognitive functioning and social/behavioral adjustment, influences their school outcomes. Second,

in order to gain greater insight into key mediating factors that bear on the process of intergenerational risk transfer, the competence of high-risk parents in supporting their children's learning and development at school age was examined. Specifically, mothers' supportive behavior both at home and in school was studied based on the prediction that their earlier parenting skills would be related to their level of support as their offspring entered school. Finally, adopting a comprehensive model of school functioning, the study examined the ways in which risk and protective factors in different domains (child characteristics, parenting, parental hardship, home context) combined to predict academic and behavioral outcomes within this moderate to high-risk sample. Specific predictions regarding these three issues are presented in each part of the study.

Method

Participants

Background. Participants in the current investigation were drawn from the larger pool of individuals who have been enrolled in the Concordia Longitudinal Risk Project since 1976. The project commenced with the recruitment of 4,109 francophone school-aged children in grades one, four, and seven. These children attended elementary schools in lower socio-economic neighborhoods in Montreal, Quebec. Based on an incremental model of psychosocial risk, children were selected for the study based on atypical behavioral styles, namely patterns of extreme aggression and social withdrawal. In total, 1,770 children met criteria for participation including 909 girls and 861 boys. Approximately half of the original participants had elevated risk profiles due to extreme displays of atypical behavior, while the other half of the sample was normative in terms of social behavior, but came from the same disadvantaged neighborhoods. Against a backdrop of relative social and economic hardship, the goal of the project was to identify childhood behavioral patterns that might predict future mental health, criminality, and a range of psychosocial difficulties. Over the years, evidence of continuing adversity in the lives of these high-risk individuals has been uncovered, including higher rates of substance abuse, poor school achievement and school dropout, as well as early parenthood (Moskowitz & Schwartzman, 1989; Serbin et al., 1998; Serbin, Moskowitz et al., 1991; Serbin, Peters et al., 1991).

As the original participants from the Concordia sample reached their late 20s and early 30s, a number of them became parents. Given the unique nature of the sample and

the longitudinal data set, intergenerational studies of two generations of Concordia participants were initiated. The current investigation involves the ongoing longitudinal study of a sub-sample of members from the project and their families. The families being followed were initially seen between 1996 and 1998 when children in the second generation were toddlers and preschoolers, ages 1 to 6. The purpose of this study was to explore processes of inter-generational transfer of risk during the early years of life. Within a total of 175 families, specific patterns of maladaptive parenting and other environmental risks to offspring were identified as a function of parental histories (see Serbin et al., in press; Serbin et al., 2000). For instance, approximately 50% of the sample had annual family incomes that fell below the Canadian low-income cutoff (see Serbin et al., 2000).

We also examined the early developmental outcomes of the children in terms of behavior, cognitive ability, and health. Of particular concern was that 60% of these young offsprings were found to be having difficulties involving cognitive/developmental delay, abnormal and delayed speech and language development, or problem behavior. This included 20% of children who were functioning in the clinical diagnostic range and an additional 40% who were functioning in the borderline range in terms of cognitive, language, or social/behavioral development (Serbin et al., 2000).

Current sample. A follow-up investigation of these 175 families was initiated in September 1999, with the goal of examining the adjustment of the children who had begun their elementary schooling. At this point, assessment of 83 children and their families has been completed. These 83 families were used for data analysis in the current

report. With respect to demographic characteristics, 41 boys and 42 girls participated in the study, ranging in age from 6.16 to 10.99 years ($M = 7.81$, $SD = .91$). In terms of grade placement, 32 children were enrolled in grade 1, 36 children were in grade 2, 12 children were in grade 3, and 3 children attended grade 4. The mothers in this sample ranged in age from 24.3 to 43.4 years ($M = 34.1$, $SD = 3.089$), while fathers' age ranged from 24.6 to 50.4 years ($M = 35.8$, $SD = 3.7$). At the birth of their first child, women were between the ages of 14 and 35 years old ($M = 24.6$ years, $SD = 3.36$). Approximately 16% of the women had become mothers by the time they were twenty years of age. In terms of marital status, approximately 15% of the women were raising their children alone (never married, separated, divorced, or widowed), while 85% of the mothers were cohabiting or married. There were no single custodial fathers in this sample.

As an indication of the socio-economic status of participating families, educational attainment was first obtained. Completed years of schooling ranged from 5 to 17 for mothers ($M = 12.05$, $SD = 2.39$), and from 6 to 17 years for fathers ($M = 11.96$, $SD = 1.96$). In the province of Quebec, high school graduation occurs at the end of the 11th grade. Nine fathers (12.2%) and sixteen mothers (20%) left high school prior to completion. A recent national survey of high school dropout rates indicated that in the province of Quebec, the percentages of men and women who do not complete high school are 20% and 12%, respectively (Human Resources Development Canada, 2002). The province of Quebec is among the two provinces (along with Prince Edward Island) with the highest dropout rate in Canada, with an average rate of 16%. The most recent estimate of national dropout rate is 12% (Human Resources Development Canada,

2002). Thus, in comparison to population norms, there were elevated dropout rates among women included in the current sample, while the men who agreed to participate in our study seemed to represent a higher functioning group in contrast to Quebec norms with respect to education. This may be attributable in part to the fact that the fathers who participated in the current study were all part of intact families. In the current research project, consent to contact the ex-spouses of female participants who were separated from the father of their children, and who may have exhibited lower socioeconomic functioning, was not sought.

In terms of income, families in the current sample had a mean annual income of \$45,388 ($SD = \$23,178$, range from \$7,926 to \$114,400). In single-parent families, the mean annual income was \$27,604 ($SD = \$16,534$, range from \$7,926 to \$57,382), whereas in two-parent families the mean income was \$48,083 ($SD = \$23,069$, range from \$7,926 to \$114,400). In 1998, the median family income in Canada was \$22,700 for single-parent families and \$52,500 for two-parent families. Approximately 5% of the sample was dependent on government social assistance (i.e., receiving welfare) at the time of the study and an additional 27% of the families were considered to be “working poor,” given that their annual income fell below the Canadian low-income cutoff (CLICO; Center for International Statistics, 1997). The annual income of about 50% of the single-parent families fell below the low-income cutoff, while 30% of the two-parent families had incomes below this level.

The descriptive information on the families included in the current sample highlights the fact that while some participants from the Concordia Longitudinal Risk

Project continued to follow a pathway of severe disadvantage and life stress that began during their childhood years, others have been able to move away from this difficult lifestyle and to establish better conditions for themselves and their families. On average, the current sample can be described as a “working poor” sample, with mean levels of education equivalent to a high-school diploma and approximately one third of the families falling below the national low-income cutoff. The fact that participants evidenced a wide range of socioeconomic functioning provided greater statistical power to detect the influence of specific risk factors on the outcomes of interest.

Measures

Time 1: The toddler and preschool years

The measures presented below were gathered during the previous phase of data collection, in the context of our study of family functioning in the home. The measures of child adjustment, parenting, and home context that were collected at that time were used as predictors of school outcomes in the current study.

Children's cognitive development. In order to assess cognitive development in early childhood, two measures were used depending on the age of the child at the time of the home visits. For children between the ages of 12 and 42 months at Time 1, the mental scale of the Bayley Scales of Infant Development II (BSID-II; Bayley, 1993) was administered. This scale assesses cognitive, language, and personal/social development. Specifically, cognitive items include auditory and visual habituation, problem solving, memory, object permanence, and perceptual organization abilities. Language items include both expressive and receptive aspects. Lastly, personal/social development items

reflect social problem solving (Bayley, 1993). The psychometric properties of the BSID-II are well documented (see Bayley, 1993).

For children aged 42 months and older at the time of the previous phase of data collection (Time 1), a French translation of the Stanford-Binet Intelligence Scale (SB-IV; Thorndike, Hagen, & Sattler, 1989) was used to assess cognitive competence. This scale provides an estimate of overall intellectual status as well as performance in specific domains (i.e., verbal and abstract/visual abilities). In order to capture general intelligence, the composite score was used in the current study. Sattler (1988) reviewed the excellent psychometric properties of the SB-IV; for instance, the median internal consistency estimate of the composite overall score was found to be .97.

For the purposes of the current study, children's scores on the Bayley and Stanford-Binet were standardized and combined to create an overall measure of children's cognitive competence in early childhood.

Children's work-related skills. While conducting standardized intellectual assessments of the children, licensed psychologists also evaluated children's work-related skills using the Ratings of Children's Behavior During Testing Scale (RCBT; Rodgers, 1995). The RCBT, presented in Appendix A, is a 24-item scale examining a number of child behaviors that contribute to or detract from ideal test performance. Based on a 5-point scale, the items address the child's motivation, concentration, perseverance, and expression of frustration during testing. Further, level of anxiety, and response to praise, instruction, and limit setting were also evaluated. Examiners rated the frequency of these behaviors during the administration of the intelligence scale. A total score was then

computed. Internal consistency of the RCBT was assessed and the alpha was found to be .93 (see Cooperman, 1999). Ratings of children's work-related skills on the RCBT have been shown to be correlated with their overall cognitive/developmental functioning (Cooperman, 1999).

Child behavioral/interpersonal style. At the time of the home visits, the Child Behavior Checklist (CBCL; Achenbach, 1991; Appendix B) was administered to the mothers of the children in our sample. The CBCL is a standardized, multi-axial, empirically-based assessment tool providing information on the presence of emotional and behavioral problems, including withdrawal, somatic complaints, anxious-depressed thoughts, social problems, thought problems, attention problems, delinquent problems, and aggressive behavior. Scores are summarized in terms of internalizing, externalizing, and total problems. For the purposes of the current study, scores on the Total Problem Scale were used. The psychometric properties of the CBCL are well documented (see Achenbach, 1991).

Parental support and stimulation at preschool age. In order to assess parenting skills at preschool age, measures of cognitive stimulation, home environment, and discipline style were collected at the time of the home visits. These scales are described below. A composite score was then created, reflecting the extent of parental support and stimulation at preschool age. This was done through factor analysis, which is considered to represent a useful approach summarizing data by grouping together variables that are correlated (Tabachnick & Fidell, 1996). In contrast to other methods of data reduction such as Cronbach's alpha, factor analysis provides information on shared variance

between variables, and on the degree of loading of each variable onto the factor. See Appendix C for the factor loadings of variables tapping into parenting at preschool age.

(a) *Cognitive stimulation.* In order to assess maternal teaching style and stimulation strategies in the context of dyadic interactions, one of two measures was used depending on the age of the child at the time of the home visits. The Emotional Availability Scales (EAS; Biringen, Robinson, & Emde, 1988) was used with younger children aged 12 to 36 months, and the Maternal Teaching Observation System (MTOS; Saltaris & Samaha, 1998) was used with children 36 months and older. These two measures were used to reflect the fact that maternal stimulation varies according to the needs and abilities of children across the toddler and preschool years. For the purposes of the current study, children's scores on the EAS and the MTOS were standardized and combined to create one measure of maternal cognitive stimulation. The overall measure of cognitive stimulation was found to be significantly correlated with ratings of the quality of the home environment ($r = .28, p < .05$).

For children who were 12 to 36 months at the time of the previous phase of data collection, maternal teaching style was assessed during a free-play period using the EAS. This measure constitutes a global rating scale designed to assess the quality of mother-infant interactions. Along with maternal sensitivity and hostility, the scale also taps into maternal scaffolding skills by measuring the degree to which the mother appropriately structures the infant's play and sets limits for the infant's behavior. These maternal behaviors are coded according to a 9-point scale (1 = none, 5 = optimal, 9 = overly high). Researchers have used the EAS to assess the quality of mother-child interaction in

both normative and risk samples (see Easterbrooks, Lyone-Ruth, Biesecker, & Carper, 1996). Adequate inter-rater reliabilities have been obtained (Cohen's Kappas ranging from .76 to over .90; Birigen & Robinson, 1991; Robinson, Little, & Birigen, 1993).

With children aged 36 months and older, the quality of cognitive stimulation was assessed using the Maternal Teaching Observation System (MTOS; Saltaris & Samaha, 1998), a rating scale designed to examine maternal sensitive and contingent teaching in the context of a semi-structured puzzle task. The coding system includes both global ratings of the interactional style of the mother-child dyad as well as recordings of specific maternal teaching behaviors. In the current study, only the rating of maternal scaffolding was analyzed. This rating reflects the extent to which the mother stimulates her child intellectually, by transferring a large part of the responsibility for the completion of the task and by using the task to teach new material to her child. Within the MTOS, an assessment of maternal scaffolding is made following each one-minute interval of the interaction, and a summary score is created to reflect the overall tendency of the mother to engage in scaffolding behaviors over the course of the interaction. Inter-rater reliability for maternal scaffolding was assessed through Pearson correlation coefficients, and was found to be .92 (see Saltaris, 1999). See Appendix D for the operational definition of the maternal scaffolding rating, as well as procedural details.

(b) *Home environment.* In order to evaluate the global efforts made by parents in the home to foster the competence of their children, the HOME Inventory (Bradley & Caldwell, 1984a, 1984b; Caldwell & Bradley, 1984: Appendix E) was administered to all participating families at Time 1. This widely used measure is based on standardized

observations of parental stimulation, support, and the physical environment made during home visits over a period of several hours. Specific items include provision of toys and learning materials to the child, stimulation of language and academic behavior, variety in opportunities and stimulation, as well as parental responsiveness and acceptance. The 55 yes/no items are clustered into eight subscales (toys and learning materials, language stimulation, physical environment, responsiveness, stimulation of academic behavior, modeling, variety of stimulation, and acceptance), and are also used to compute an overall score for the quality of the home environment. This overall score was used in the current analyses. The reliability and validity of this scale are well established in an extensive literature (e.g., Bradley & Rock, 1985; Luster & Dubow, 1992).

(c) *Discipline style.* As a way to tap into maternal discipline practices at preschool age, the Parenting Scale (Arnold, O'Leary, Wolff, & Acker, 1993; Appendix F) was administered along with the Control Type subscale of the Parenting Dimensions Inventory (PDI; Slater & Power, 1987; Appendix G). The Parenting Scale is a 30-item self-report questionnaire examining attitudes of laxness, overactivity, and verbosity in relation to parental discipline and monitoring. A total score can also be created, which reflects overall parenting. Arnold and colleagues (1993) reviewed the psychometric properties of this instrument. The internal consistency for the Total Score was found to be .84, and the test-retest correlation was estimated at .84.

The Control Type subscale of the PDI examines different types of discipline practices and requires parents to indicate how likely they would be to use these various strategies when interacting with their young children. The practices include physical

punishment, material/social consequences, reasoning, scolding, and reminding (see Power (1993) for a description of the adequate psychometric properties of this subscale).

For the purposes of the current study, mothers' total score on the Parenting Scale and their ratings of different discipline practices on the PDI were combined through factor analysis. Two factors emerged, one tapping into more negative discipline practices (scolding, physical punishment, material/social consequences) and one reflecting more positive practices (reasoning, reminding, overall parenting on the Parenting Scale). The factor tapping into positive discipline style was retained for the current analyses (see Appendix H).

Maternal hardship. In order to assess mothers' personal struggles and overall adjustment, measures related to marital status, parenting stress, satisfaction with social support, and overall symptomatology were examined. Marital status was obtained through the administration of a demographic information questionnaire, described later. The scales used to tap into parenting stress, social support, and symptomatology are presented below. A factor comprised of the different measures of hardship was subsequently created, and used in the analyses for the current study (see Appendix I for a description of this factor).

(a) *Parenting stress.* The level of subjective stress experienced by mothers in the current sample was assessed using the Parenting Stress Index (PSI-III; Adibin, 1990; Appendix J). This self-report instrument reflects the amount of stress experienced by individuals in relation to their parenting roles and responsibilities. The types of stressors captured by this scale include child level of activity and demandingness, parental

isolation, and parents' subjective feeling of being trapped by their parenting responsibilities. Items can be grouped into two major scales, pertaining to the child domain and the parent domain. A total score reflecting global parenting stress can also be calculated, and was used in the creation of the factor of maternal hardship in the current study. The good psychometric properties of this instrument are described in Adibin (1995).

(b) *Parenting social support.* The Parenting Social Support Index (PSSI; Tellen, 1985; Appendix K) was administered to participating mothers at Time 1. The PSSI is a 22-item self-report measure tapping into seven forms of support received by parents: relationship with a confidant, material aid, advice about childrearing, positive feedback, assistance with household tasks, child care, and social participation. For each of these categories, respondents consider the past 30 days and rate their need for the particular type of support on a 5-point Likert scale ranging from "no need at all" to "very great need." Next, participants indicating a need for support identify providers of such support in their social network. Finally, they rate their satisfaction with the support they receive on a 5-point Likert scale ranging from "very dissatisfied" to "very satisfied." Three total scores are generated (total perceived need for support, total network size, and total support satisfaction) by summing across items. In the current study, satisfaction with social support was examined. Telleen (1985) provided data on the psychometric properties of this instrument.

(c) *Symptomatology.* In order to assess mothers' psychological well-being, the Symptom Checklist (SCL-90; Derogatis, Lipman, & Covi, 1973; Appendix L) was

administered to all mothers in the current sample at the time their children were toddlers and preschoolers. This instrument is designed to measure the level of discomfort associated with psychological or somatic symptoms within a community sample. Individuals are asked to rate the severity of each of ninety symptoms on a 5-point distress scale (from “not at all” to “extremely”). The symptom dimensions include Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Paranoid Ideation, and Psychoticism. A Global Severity Index (GSI) can be obtained by summing ratings in different subscales, and was used in the current analyses. The SCL-90 has been shown to have very good internal consistency and high convergent validity (see Derogatis, Rickels, & Rock, 1976).

Sociodemographic Information. The Demographic Information Questionnaire (DIQ; Concordia Longitudinal Risk Project, 1993) was used to gather socio-demographic data on the families participating in the study. From this questionnaire, the parents’ educational level, current occupation, and income were obtained. As well, this scale was used to assess family composition, including marital status. The DIQ was completed over the telephone at the time the participants were contacted to obtain consent for the study. See Appendix M for a copy of this questionnaire.

Time 2: The early school years

The following measures were collected in the latest phase of data collection, in the context of visits made to the children’s schools. Children taking part in the study were between the ages of 6 and 10, and were enrolled in grades 1 to 4.

Children's academic achievement

Report cards. Parent consent was obtained to collect final report cards for each child who took part in the study. From these official records, grades in language arts (including reading, writing, and oral communication) and mathematics were extracted and averaged to create a measure of children's overall academic achievement.

Standardized testing. Separate standardized instruments were used to measure children's abilities in the areas of reading and mathematics.

(i) *Reading.* The BQAL (Bilan Qualitatif de l'Apprentissage de la Lecture; Campeau-Filion & Gauthier, 1989) is designed to assess reading skills and to identify specific difficulties in the areas of decoding and comprehension that children may encounter in the development of reading abilities. The instrument is mostly used to evaluate the competence of children in early elementary grades (grades 1 to 3), and has been shown to reliably predict future learning disabilities (Campeau-Filion & Gauthier, 1989). The BQAL is divided into ten sections of increasing difficulty, starting with the recognition of individual letters to the ability to read and understand short stories. Items are based on a multiple-choice rating system. Appendix N presents a general description of the scale and of its ten sections.

(ii) *Mathematics.* The numerical operations subtest from the Weschler Individual Achievement Test (WIAT; The Psychological Corporation, 1992; Appendix O) was administered to all children in our sample. This individually administered scale is comprised of a set of 40 problems assessing the ability to write dictated numerals and solve calculation problems involving all basic operations (i.e., addition, subtraction,

multiplication, and division). Basal and ceiling levels are first obtained, and an overall standardized score of children's numerical abilities is then computed. Finally, individual scores are compared to either age or grade norms, providing standardized scores. The psychometric properties of this instrument are good (The Psychological Corporation, 1992).

Children's work-related skills at school age

Teachers' perceptions of the classroom adjustment of the target children were assessed using a French translation of the Social Competence Scale (SCT, Gifford-Smith, 2000; see Appendix P). This 25-item instrument measures three separate factors: prosocial behaviors skills, emotion regulation abilities, and work-related behaviors pertaining to attention, perseverance, and concentration. Teachers rate each item on a 5-point Likert scale, according to how well it characterizes the behavior of the child (from "not at all" to "very well"). The psychometric properties of this instrument have been well established (Gifford-Smith, 2000). For example, the internal consistency of the total scale as well as that of the three factor scores is high (.96 and above). For the purposes of the current study, the factors pertaining to emotion regulation and work-related skills were combined to provide an assessment of children's work-related skills at school age.

Children's behavioral/interpersonal style at school age

Mothers' perspective. Mothers of the children in our sample were asked to rate children's behavior using the Child Behavior Checklist (CBCL; Achenbach, 1991; see description in section on Time 1 measures) as well as the Conner's Parent Rating Scales-48 (CPRS-48; Conners, 1990; Appendix Q). The latter is an instrument that serves to

examine the presence of behavior problems specifically related to inattention and hyperactivity. The 48 items are rated based on a 4-point Likert-type scale assessing the extent to which the child manifests various problem behaviors, from "not at all" to "very much." The CPRS-48 includes scales for (a) conduct problem, (b) learning problem, (c) psychosomatic problem, (d) impulsive-hyperactive, and (e) anxiety. A Hyperactivity Index can also be computed. The psychometric properties of the Conners' Rating Scale are excellent (see Conners, 1990). A large body of research demonstrates the ability of the Conner's Scale to effectively discriminate between various diagnostic groups. For instance, it has been used to discriminate between hyperactive children and their normal peers (Conners, 1990). For the purposes of the current study, the subscales reflecting conduct problems, impulsive-hyperactive tendencies, as well as the Hyperactivity Index were retained. These three factors from the Conners, along with scores on the Total Problem Scale of the CBCL, were combined through factor analysis to create an overall measure of children's behavioral/interpersonal style at school age (see Appendix R for a description of this factor).

Teachers' perspective. In order to assess teachers' perspective on children's behavioral/interpersonal style at school age, teacher versions of the Child Behavior Checklist (TRF; Achenbach, 1991; Appendix S) and the Conners Rating Scales (CTRS-28; Conners, 1990; Appendix T) were administered. A summary factor was then created using the Total Problem Scale of the TRF, the Hyperactivity Index of the CTRS-28, as well as the prosocial behaviors skills factor from the Social Competence Scale (see

description under “children's work-related skills at preschool age”). Refer to Appendix U for a description of this summary score.

Children's referral status

As part of the questionnaires filled out by mothers, information was collected on whether or not the target children had previously received a referral for clinical or educational services. Mothers were asked whether their child had ever been referred for special services, what the presenting problem was, and what type of service was recommended.

Maternal supportive behavior at home

In order to examine parents' efforts to support the learning of their school-age children at home, The Parenting Dimensions Inventory (PDI; Slater & Power, 1987; Appendix G) was administered to all participating mothers during the latest phase of data collection. This instrument is a self-report questionnaire that consists of 47 items assessing eight dimensions of parenting: three measuring parental support (nurturance, responsiveness to child input, and nonrestrictive attitude), three tapping into parental control (type of control, amount of control, and maturity demands), and two assessing parental structure (consistency and organization). The PDI has been shown to have high internal consistency (Slater & Power, 1987). As well, in two studies involving multiple ratings of child and mother behavior (Boggio, 1987; Sharp, 1988), mothers' scores on the PDI were significantly correlated with both fathers' and best friends' ratings of maternal behavior. For the purposes of the current study, the factors measuring parental support

and structure were combined to reflect the extent to which mothers displayed a supportive and sensitive parenting style in the home with their school-aged children.

Maternal supportive behavior at school

Teachers of the target children were asked to complete a French translation of the Parent-Teacher Involvement Measure (Conduct Problems Prevention Research Group, 1991). This scale, presented in Appendix V, is comprised of three factors: parent comfort in their relationship with the teacher and school in general, parent involvement and volunteering at their child's school, and parent-teacher contact. These three factors are combined into a global score reflecting parental involvement in the school life of their children. The answers are coded on a 5-point scale including specific frequency ratings (from "never" to "more than once per week"), general impressions of frequency (from "not at all" to "a great deal"), and level of agreement with statements about school (from "strongly disagree" to "strongly agree"). Malone, Miller-Johnson and Maumary-Gremaud (2000) present information regarding the good psychometric properties of this instrument.

School context

In order to examine characteristics of the schools attended by the target children, contacts were made with the different school boards responsible for the schools of children in the current sample. Specifically, information was collected on the overall socioeconomic status of children attending each school, the percentage of children successfully meeting grade requirements, as well as the percentage of children in each school receiving a Ministry of Education "code," which identifies specific learning, developmental, and/or behavioral problems.

Sociodemographic information

The Demographic Information Questionnaire (DIQ; Concordia Longitudinal Risk Project, 1993; see description earlier in *Method* section) was again used to gather socio-demographic data on the families participating in the study. The DIQ was completed over the telephone at the time the participants were contacted to obtain consent for the current phase of the study.

Procedure

The families were initially seen in the context of visits made to the participants' homes when children were toddlers and preschoolers. The participants were recruited and tested during the period spanning from September 1996 through April, 1998. Potential participants were contacted by telephone in order to explain the nature of the study and the testing protocol. During this phone contact, demographic information on the participants was updated. With those families giving consent to participate, appointments were scheduled for two home visits lasting up to three hours and separated by a 1-week interval. The research team generally consisted of an M.A. level licensed psychologist and a research assistant/graduate student (the authors and other research assistants). During the two home visits, families participated in structured interviews, videotaped observations of interaction and play, and standardized cognitive-developmental assessments of children. Parents also completed a number of questionnaires tapping into psychological functioning, parenting stress, parenting practices, and perceptions of child behavior. Appendix W presents a description of the

testing protocol for the overall Parent-Child Study that took place between 1996 and 1998. Of note, some aspects of the protocol are not relevant to the present investigation.

When the target children reached school age, the families were contacted again in order to invite them to participate in a follow-up study of children's functioning in school. Parents were phoned to request consent for school testing and release of school records (i.e., report cards). Upon verbal agreement to participate, parents received a written consent form along with questionnaires measuring parenting style at home and perceptions of child behavior and functioning (See Appendix X for a copy of the consent form). Once these documents were returned, the school principal was contacted and an appointment was set up to visit children in their school setting to conduct individualized academic assessments and interviews. The testing session was designed to last approximately one hour. At the time of the school visits, the children's teachers were solicited to complete questionnaires tapping into perceptions of child adjustment and maternal school involvement. Teachers were asked to return these questionnaires by mail. At the end of the school year, schools were again contacted in order to obtain copies of children's final report cards. The author and two research assistants shared the task of data collection.

Part I: Early child characteristics as precursors of adjustment during school transition

The first aspect of school transition that was examined in the current study involved predicting various aspects of school adaptation from children's earlier functioning. The five outcome variables included: (a) academic achievement, (b) work-related skills in the classroom, (c) maternal perceptions of behavioral/interpersonal style at home, (d) teacher perceptions of behavioral/interpersonal style at school, and (e) referral to special educational services. Each of these variables represents a different marker of children's adjustment during the early elementary grades. Recent conceptualizations of school adaptation have emphasized the notion that success in the school setting is a multifaceted construct, which not only involves cognitive reasoning and mastery of problem-solving skills, but that also depends on such factors as working strategies and prosocial attitudes on the part of the child (Ladd et al., 1999; Ramey & Ramey, 1999).

To date, few empirical studies have examined these outcome variables together. Most of the research on the early schooling process of young children, in particular that of low-income and other high-risk youngsters, has emphasized academic achievement as the primary marker of school success (e.g., Ricciuti, 1999; Walker, Greenwood, Hart, & Carta, 1994). Only a few investigations have examined other outcomes such as social, behavioral, or affective functioning, and typically these aspects of children's competence have been grouped together under broad labels such as "socioemotional maturity" (see Reynolds, 1989, 1991; Reynolds & Bezruczko, 1993). Within these studies, it is often difficult to identify the most critical precursors of different facets of school success.

A growing literature suggests that school adjustment is most accurately viewed as a function of several readiness attributes that combine to affect children's developing competence long before they make their entry into school (e.g., McClelland et al., 2000; Reynolds, 1991). Children's characteristics and abilities not only play a direct role in shaping their development, but may also influence outcomes indirectly by affecting the behavior, reactions, and expectations of parents and teachers towards them. As noted by Dion and Moriner (1999), the reciprocal relationship between child characteristics and reactions from caregiving adults is critical in determining outcomes over time.

Following children from the preschool period to the time they make their entry into school is critical in order to examine prospectively early child characteristics that contribute to learning competence during the first few elementary grades. Longitudinal designs are best suited to determine the stability of children's level of development and functioning, while exploring the wide variability in child outcomes. Research conducted to date using longitudinal designs has highlighted the fact that individual differences in certain child characteristics, such as preschool IQ, are predictive of school performance (Ladd, 1996; Reynolds, 1989; Rowe, 1994). In contrast, less attention has been paid to other child factors that may influence school outcomes over time, such as social behavior. A few researchers have begun to demonstrate the association between various aspects of social behavior, including children's preschool behavioral/interpersonal style and work-related skills, and their overall adjustment to school (e.g., Wentzel, 1991, 1993). For example, based on data from a sample of 82 children attending middle-class schools in Greensboro, North Carolina, McClelland et al. (2000) indicated that in addition to child

IQ, work-related skills measured at the beginning of kindergarten predicted academic achievement at the end of second grade.

These recent findings suggest that social behavior has the potential of making an important contribution to successful school transition. Yet, the information currently available primarily concerns the prediction of academic achievement, and as such additional work exploring the impact of social/behavioral skills on other aspects of children's school adjustment is required. Moreover, although considerable progress is being made in our general understanding of the determinants of school outcomes, less is known regarding the specific child characteristics that predict the school competence of children who are most vulnerable to adjustment difficulties during the early grades. Within a group of high-risk children from the Concordia project, Part I of the current study examined a range of determinants of school functioning, including preschool cognitive abilities, work-related skills, and behavioral/interpersonal style. The purpose of this research endeavor was to examine associations between these early child characteristics and various aspects of school adaptation, in an attempt to gain a more thorough understanding of the schooling process of vulnerable children.

Earlier findings from our project illustrated elevated rates of developmental and behavioral difficulties among the target children, at the time they were toddlers and preschoolers (Serbin et al., 2000). On the basis of well-established research findings underscoring the stability in children's functioning (Entwisle & Hayduk, 1988), in the current study it was anticipated that adjustment problems (e.g., lower academic

performance, greater behavior problems) would again be observed in a substantial proportion of the children at school age.

It was also predicted that early child characteristics would represent important determinants of each of the facets of children's adaptation during their transition to school. In line with previous research (e.g., Reynolds, 1989), it was expected that children's cognitive skills during the preschool years would represent the strongest predictor of various aspects of school adjustment. It was also hypothesized that children's early social behavior, specifically their preschool behavioral/interpersonal style and work-related skills, would predict their behavioral/ interpersonal style at school age.

Finally, based on substantial evidence from our project and from other research studies regarding gender differences in achievement and overall adjustment (Alexander & Entwisle, 1988; Pellegrini & Blatchford, 2000; Serbin et al., 1998, 2000), it was anticipated that boys would be at greater risk than girls for school problems in the critical period of the early grades. Specifically, it was hypothesized that gender would be associated with individual differences in academic achievement, work-related skills, behavioral/interpersonal style, and referral status, with boys encountering greater adjustment difficulties.

Results

The findings from Part I are presented in two sections. First, a brief description of the overall functioning of the eighty-three school-age children is provided. Next, the results of multiple regression analyses examining preschool child abilities and characteristics as predictors of school outcomes are reviewed.

Overview of current functioning. The 83 children who participated in this study were identified as a group at elevated risk for learning and school adjustment problems as a function of their family background and development throughout the preschool years (see the *Method* section). Information gathered during the latest phase of data collection from various sources confirms the continuing risk status of this group of children, while highlighting the wide variability in their functioning.

On average, the current sample exhibited significant difficulties adjusting to the demands of the early school grades, and a substantial proportion of the children required interventions and services to help them face these obstacles. Specifically, on standardized measures of reading (BQAL; Campeau-Filion & Gauthier, 1989) and mathematical abilities (WIAT; The Psychological Corporation, 1992), the proportion of children who scored below one standard deviation of the norm for their grade was 20% and 18%, respectively. At the time of testing, approximately 7% of the children (6 pupils) had already repeated a grade. More than 9% of children in grade 1 ($N = 3$) were older than expected due to grade retention (21% of boys, no girls), while 5.6% of children in grade 2 ($N = 2$; 10% of boys, no girls) and 8.33% of children in grade 3 ($N = 1$; 14% of girls, no boys) were in the same situation. Important sex differences were present in the rates of grade retention, with approximately 12.2% of boys and 4.8% of girls in this sample having been held back. In the province of Quebec, during the 1999-2000 academic year, 4.8% of boys and 3.2% of girls repeated a grade in elementary school (www.meq.gouv.qc.ca). In addition, according to maternal reports, 42% of the children in this sample (55% of the boys, 29% of the girls) have been identified as requiring a referral for clinical services for

treatment of psychological, developmental, or academic problems. The most frequent reasons for referral were language and other developmental problems.

With respect to behavioral and social functioning, the average scores on the Total Problem Scale of the Child Behavioral Checklist (CBCL, maternal and teacher reports) for the total sample were 54 and 55, respectively (these values represent T scores, with a normative mean of 50 and a standard deviation of 10 in the general population).

Although these scores were not highly elevated, there was still evidence of adjustment difficulties in this sample of high-risk children. In comparison with an expected rate of 5%, almost 10% of the children reached the clinical range on the total scale of the CBCL as rated by mothers. Gender differences in behavioral problems were apparent: 17.5% of boys and 2.5% of girls had total scores falling above the 95th percentile, in the clinical range.

Thus, in comparison to population norms, a significant proportion of the children in the current sample exhibited adjustment difficulties at school age. Given the evidence from the previous phase of data collection, when the target children were toddlers and preschoolers, it appears that many of the youngsters continued their problematic trajectories from early childhood to the time of school transition. A range in functioning was also present, however, and this variability provided an opportunity to study preschool factors that were predictive of cognitive and social adaptation after school entry.

Prediction of school adjustment. In line with the research questions being pursued in the current study, the predictors of several different indices of school adjustment were examined. Regression analyses were carried out on five measures of school functioning,

including academic achievement, work-related skills in the classroom, behavioral/interpersonal style (both mother and teacher perspectives), and referral to special clinical and educational services. The correlation matrix for this set of analyses is presented in Table 1. According to criteria established by Cohen & Cohen (1983), correlation coefficients between the various outcome variables ranged from small to medium size, with one correlation in the large range. Specifically, the correlation between children's work-related skills in the classroom and teacher ratings of their behavioral style was found to be $-.79, (p < .01)$. To a large extent, the overlap between these two factors can be attributed to the fact that teachers were selected to be informants in both cases. Because the correlation was not elevated enough to create problems of multicollinearity (see Tabachnick & Fidell, 1996), and in view of the fact that the two constructs were conceptually distinct, they were maintained as separate outcome measures in the final set of analyses.

In the hierarchical multiple regressions presented below, independent variables included children's gender, grade placement, preschool work-related skills, behavioral/interpersonal style, and cognitive functioning. Current family socioeconomic status (income and parents' occupational prestige) was also entered in the regression equations in order to control for the impact of disadvantage on children's adjustment within this risk sample. Interactions between child gender and preschool characteristics were considered in initial exploratory analyses, but none of these predictors reached statistical significance. Consequently, they were omitted from the final analyses.

For each of the hierarchical regression equations, the variable of family SES was entered first in order to control statistically for its potential impact on children's school outcomes. It was followed by child gender and grade placement, two child characteristics that were also considered as control variables. Then, the preschool child characteristics of interest were entered in the regression equations. Aspects of children's learning-related social behavior, namely their work-related skills and behavioral/interpersonal style at preschool age, were entered together in a separate step, prior to preschool IQ. Whereas previous studies had generally portrayed child IQ as the strongest predictor of school outcomes without controlling for other child characteristics, this design allowed us to examine the influence of cognitive reasoning beyond that of other precursors of school success. In addition, the specific contribution of children's learning-related social behavior to their subsequent school success could be assessed in this study. In the last step of the regression equations, all predictors were allowed to compete for the variance in school functioning, thereby providing a test of the strength of each of the independent variables. In the description of results below, independent variables are discussed in terms of their predictive power at the step at which they were entered in the equations. All regression equations produced statistically significant multiple correlations ($p < .05$).

When examining determinants of academic achievement (Table 2), SES did not make a significant contribution when it was entered in the first step of the equation. In the second step, children's grade placement was found to relate to academic abilities ($\beta = -.26, p < .05$), with children in higher grades encountering greater struggles in meeting expectations than children in lower grades. In the subsequent step, preschool

Table 1

Correlation Matrix for the Prediction of School Adjustment from Children's Preschool Characteristics and Abilities

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Grade placement	---	-.11	-.04	-.02	.19 ^a	-.06	-.27*	-.19	.10	.24 ^a	-.05
2. Socioeconomic status		---	.00	.33**	.19 ^a	-.14	.09	.26*	-.10	-.13	-.12
3. Child gender ^a			---	.19 ^a	.25*	-.11	.14	.40**	-.27*	-.34**	-.27*
4. Preschool IQ				---	.50**	-.12	.38**	.39**	-.25*	-.22 ^a	-.40**
5. Preschool work-related skills					---	-.26*	.23*	.27*	-.19 ^a	-.26*	-.34**
6. Preschool behavioral style						---	-.16	-.02	.49**	-.04	.10
7. Academic achievement							---	.47**	-.23*	-.32*	-.33**
8. Work-related skills in classroom								---	-.26*	-.78***	-.24*
9. Behavioral style at school age (mother's perspective)									---	.35**	.17
10. Behavioral style at school age (teacher's perspective)										---	.09
11. Referral to special services											---

Note. N=83

^a Males = 0, Females = 1* $p < .05$. ** $p < .01$. *** $p < .10$.

Table 2

Regression Analysis Predicting Academic Achievement from Children's Characteristics and Abilities

Variable	β	sr^2	t	R^2_{ch}	F_{ch}
Step 1				.01	.75
Family SES	.10	.10	.87		
Step 2				.09	3.88*
Family SES	.07	.07	.62		
Child gender ^a	.15	.15	1.44		
Grade placement	-.26	-.26	-2.45*		
Step 3				.07	3.28*
Family SES	.00	.00	.01		
Child gender	.08	.08	.78		
Grade placement	-.32	-.31	-2.98**		
Preschool work-related skills	.24	.22	2.13*		
Preschool behavioral style	-.10	-.10	-.93		
Step 4				.07	7.25**
Family SES	-.08	-.07	-.74		
Child gender	.06	.05	.54		
Grade placement	-.29	-.28	-2.85**		
Preschool work-related skills	.09	.08	.76		
Preschool behavioral style	-.11	-.10	-1.08		
Preschool IQ	.33	.27	2.69**		
Total	$R = .49 \quad R^2_{adj.} = .18 \quad F = 4.02^{**}$				

Note. N= 83.

^a 0 = boys; 1 = girls

* $p < .05$. ** $p < .01$. *** $p < .001$. ' $p < .10$.

work-related abilities were linked to children's academic achievement ($\beta = .24, p < .05$), indicating that children who displayed greater attention, concentration, and perseverance when working in a structured context in early childhood were able to master elements of the curriculum more easily after school entry. Finally, when entered in the last step of the equation, cognitive functioning emerged as a strong predictor of academic achievement ($\beta = .33, p < .01$). Children who scored higher on standardized measures of intellectual skills at preschool age also mastered better aspects of the curriculum in language and mathematics following their entry into school. When all the predictors were entered into the equation, the overall model accounted for 18% of the variance in academic achievement; grade placement and preschool cognitive abilities remained the only significant determinants of academic outcomes.

As can be seen in Table 3, work-related skills in the classroom were predicted by the family's socioeconomic status ($\beta = .24, p < .05$), with higher SES predicting greater work orientation on the part of the child. In step 2 of the regression model, there was a significant effect of child gender ($\beta = .41, p < .001$) indicating that boys were generally rated by teachers as exhibiting fewer work-related skills than girls, and a marginal effect of grade placement ($\beta = -.20, p < .10$), suggesting that teachers had a tendency to perceive children in higher grades as displaying lower levels of attention and autonomy than children in earlier grades. In the last step of the equation, preschool IQ ($\beta = .24, p < .10$) emerged as a marginal predictor of work-related skills. This finding indicated that children who displayed greater cognitive skills during the preschool years tended to become more autonomous learners with better work-related skills. When all predictors

Table 3

Regression Analysis Predicting Work-Related Skills in the Classroom from Children's Characteristics and Abilities

Variable	β	sr^2	t	R^2_{ch}	F_{ch}
Step 1				.06	4.02*
Family SES	.24	.24	2.00*		
Step 2				.19	7.72***
Family SES	.24	.23	2.12*		
Child gender ^a	.41	.40	3.66***		
Grade placement	-.20	-.20	-1.80 ^t		
Step 3				.02	1.00
Family SES	.22	.21	1.92 ^t		
Child gender	.38	.36	3.27***		
Grade placement	-.22	-.22	-1.98*		
Preschool work-related skills	.16	.14	1.31*		
Preschool behavioral style	.10	.09	.83		
Step 4				.03	3.13 ^t
Family SES	.14	.13	1.18		
Child gender	.36	.34	3.16**		
Grade placement	-.20	-.19	-1.77 ^t		
Preschool work-related skills	.06	.05	.48		
Preschool behavioral style	.09	.09	.80		
Preschool IQ	.24	.19	1.77 ^t		
Total		$R = .55$	$R^2_{adj.} = .24$	$F = 4.37^{**}$	

Note. N = 63.

^a 0 = boys; 1 = girls

* $p < .05$. ** $p < .01$. *** $p < .001$. ^t $p < .10$.

become more autonomous learners with better work-related skills. When all predictors were included in the equation, the model explained approximately 24% of the variance in children's work-related skills in the classroom. Child gender was the only predictor that remained statistically significant. The impact of grade placement and preschool IQ were marginally significant (p 's < .10).

Next, predictors of maternal ratings of children's negative behavioral/interpersonal style at home (Table 4) included (a) child gender ($\beta = -.28, p < .05$), with boys rated by their mothers as exhibiting more behavior problems than girls, and (b) previous maternal reports of children's behavioral style at preschool age ($\beta = .45, p < .001$). When examining teacher ratings of children's negative behavioral/interpersonal style at school (Table 5), child gender emerged as a significant predictor in step 2 ($\beta = -.34, p < .05$), with boys rated by their teachers as exhibiting more behavior problems than girls. Grade placement was also related to teacher ratings of children's behavior in the classroom ($\beta = .26, p < .05$), with children in higher grades considered to manifest greater behavior problems than children in lower grades. Finally, work-related skills at preschool age were also found to contribute to subsequent behavioral adjustment at school in the third step of the equation ($\beta = -.27, p < .05$), suggesting that children with greater work orientation in early childhood displayed overall better adjustment in the presence of classroom peers and teachers. Interestingly, maternal ratings of children's behavioral style at preschool age did not emerge as a significant predictor of teacher reports of the behavioral and social adjustment of their pupils after school entry.

Table 4

Regression Analysis Predicting Negative Behavioral Style (Maternal Ratings) from Children's Characteristics and Abilities

Variable	β	sr^2	t	R^2_{ch}	F_{ch}
Step 1				.01	.74
Family SES	-.10	-.10	-.86		
Step 2				.09	3.76*
Family SES	-.08	-.08	-.77		
Child gender ^a	-.28	-.28	-2.61*		
Grade placement	.10	.10	.97		
Step 3				.21	11.41***
Family SES	-.01	-.01	-.09		
Child gender	-.22	-.21	-2.23*		
Grade placement	.15	.14	1.50		
Preschool work-related skills	-.05	-.04	-.47		
Preschool behavioral style	.45	.43	4.55***		
Step 4				.02	2.48
Family SES	.04	.03	.35		
Child gender	-.21	-.20	-2.09*		
Grade placement	.13	.13	1.37		
Preschool work-related skills	.03	.02	.29		
Preschool behavioral style	.46	.44	4.65***		
Preschool IQ	-.18	-.15	-1.57		
Total		$R = .57$	$R^2_{adj.} = .27$	$F = 6.08***$	

Note. N= 83.

^a 0 = boys; 1 = girls

* $p < .05$. ** $p < .01$. *** $p < .001$. ^c $p < .10$.

Table 5

Regression Analysis Predicting Negative Behavioral Style (Teacher Ratings) from Children's Characteristics and Abilities

Variable	β	sr^2	t	R^2_{ch}	F _{ch}
Step 1				.01	.93
Family SES	-.12	.24	-.97		
Step 2				.16	5.98**
Family SES	-.09	.23	-.74		
Child gender ^a	-.34	.40	-2.90**		
Grade placement	.26	-.20	2.23*		
Step 3				.07	2.58 ^t
Family SES	-.06	.21	-.52		
Child gender	-.31	.36	-2.60*		
Grade placement	.31	-.22	2.64*		
Preschool work-related skills	-.27	.14	-2.17*		
Preschool behavioral style	-.14	.09	-1.14		
Step 4				.00	.10
Family SES	-.05	.13	-.37		
Child gender	-.30	.34	-2.55*		
Grade placement	.31	-.19	2.57*		
Preschool work-related skills	-.25	.05	-1.82 ^t		
Preschool behavioral style	-.14	.09	-1.13		
Preschool IQ	-.04	.19	-.32		
Total		$R = .50$	$R^2_{adj.} = .17$	$F = 3.11^{**}$	

Note. N= 63.

^a 0 = boys; 1 = girls

* $p < .05$. ** $p < .01$. *** $p < .001$. ^t $p < .10$.

Finally, predictors of referral status were examined through logistic regression (see Table 6). This approach to statistical analysis was necessary because of the categorical nature of the dependent variable (i.e., children received a yes/no score on referral status). For purposes of consistency across analyses, the same order of entry of predictor variables as previous hierarchical regression analyses was used. When examining whether or not a child had received a referral for special services, family SES did not make a significant contribution when it was entered in step 1. Significant independent variables included (a) child gender in step 2 ($\beta = -1.16$, Odds Ratio=.31, $p < .05$) with boys being 3.18 times more likely to receive a referral than girls, (b) child work-related skills in preschool in step 3 ($\beta = -.57$, Odds Ratio=.57, $p < .05$), indicating that children who displayed good attention and self-regulation skills in early childhood were less likely to be referred for special services by the time they reached school age, and (c) preschool IQ in step 4 ($\beta = -.75$, Odds Ratio=.47, $p < .05$), highlighting the fact that children with lower IQs at preschool age were two times more likely to be referred for services by the time they reached the early grades. When child IQ was entered into the regression equation, the influence of preschool work-related skills on referral status was reduced and became nonsignificant. Child gender remained marginally significant ($p < .10$).

Discussion

As expected, many of the offspring of participants from the Concordia project continued their problematic trajectories from early childhood to the time of the early grades, and as such struggled to meet the challenges attached to making the transition into school. In comparison to population norms reported earlier, a significant proportion

Table 6

Regression Analysis Predicting Referral Status from Children's Characteristics and Abilities

	Beta	SE	p value	Odds Ratio	χ^2
Step 1					.74
Family SES	-.20	.24	.39	.82	
Step 2					5.90*
Family SES	-.26	.25	.30	.77	
Child gender ^a	-1.16	.50	.02	.31	
Grade placement	.12	.30	.69	.89	
Step 3					4.59*
Family SES	-.17	.26	.52	.85	
Child gender	-.95	.52	.07	.39	
Grade placement	.03	.32	.93	1.03	
Preschool work-related skills	-.57	.28	.04	.57	
Preschool behavioral style	-.01	.27	.95	.98	
Step 4					5.22*
Family SES	-.00	.29	.99	.99	
Child gender	-.89	.54	.10	.41	
Grade placement	-.05	.33	.87	.95	
Preschool work-related skills	-.25	.32	.44	.99	
Preschool behavioral style	-.00	.28	.99	.77	
Preschool IQ	-.75	.35	.03	.47	

Note. N=83.

^a 0 = boys; 1 = girls

* $p < .05$. ** $p < .01$. *** $p < .001$.

of the children exhibited difficulties in terms of academic achievement as well as social and behavioral adjustment, thereby supporting the assumption that this group of children was at risk for psychosocial and learning problems.

Children's school adjustment during the early grades was predicted by a variety of factors, including children's preschool cognitive skills, learning-related social behavior (work-related skills and behavioral/interpersonal style), gender, and grade placement. The finding that preschool IQ represented a powerful predictor of school outcomes, in particular academic achievement and referral to special educational services, is consistent with the literature which indicates relations between children's cognitive reasoning skills in early childhood and their later ability to master elements of the school curriculum (e.g., Reynolds, 1989). The current findings, by demonstrating the impact of preschool IQ while controlling for other important child characteristics such as gender and learning-related social behavior, provide strong support for considering cognitive reasoning as one of the most critical indicators of school readiness. The influence of children's early learning-related behavior on their overall adjustment at school age should also be recognized. In particular, early work-related skills were found to be related to children's academic achievement and behavior in the classroom (Tables 2 and 3). Preschool social behavioral style emerged as a strong predictor of their behavioral adjustment as rated by mothers (Table 4).

Consistent with previous research findings (see Pellegrini & Blatchford, 2000), the current results highlighted the fact that boys tend to encounter greater obstacles than girls in becoming autonomous and social learners in the school context. Child gender

emerged as a significant predictor of working style in the classroom, referral status, and behavioral/interpersonal style both at home and at school, with boys exhibiting lower levels of work-related skills and more disruptive behavior according to their mothers and teachers. Interestingly, in the current study child gender was not found to bear significantly on academic performance, as measured by report card grades. This finding is somewhat surprising in light of the literature demonstrating consistent gender differences in achievement (e.g., Pellegrini & Blatchford, 2000). Yet, it should be noted that most studies examined the school performance of boys and girls in middle childhood, and fewer investigations focused on the early grades. It is possible that gender influences achievement in a gradual and cumulative fashion, making its impact visible only at a later point in time. In fact, the elevated rates of social and behavioral difficulties already apparent among boys in the early grades may over time interfere with their ability to attend to the material presented to them by their teachers and to master aspects of the school curriculum. As such, the gender difference in school functioning may be more attributable to work-related skills than to differences in cognitive abilities that exist between boys and girls.

Within this risk sample of school-age children, there was an effect of grade placement on several aspects of school adjustment, suggesting that children in higher grades struggled more in meeting the demands of school and in facing adult expectations than children in lower grades. Because children were not followed annually as they progressed through the elementary grades, the comparisons between children at different grade levels are cross-sectional in nature. In addition, the sample size was smaller in

grades 3 and 4, which may have contributed to a restricted range and to limited statistical power. As such, interpretations should be made cautiously. Nevertheless, the current findings appear to indicate that high-risk children encounter increasing difficulties in school as the requirements for performance and autonomy increase. It may be that as a group, vulnerable children possess sufficient cognitive and socio-emotional resources to meet the minimal requirements of the first year of school. As expectations become greater, however, there may be a cumulative effect of learning difficulties over time, and the learning and developmental curve of these vulnerable children may be slower than that of children with greater resources.

Within a moderate to high-risk sample, the results of Part I highlighted the relative stability in children's level of development and functioning over the early childhood years. When interpreting these findings and when trying to account for this stability, we are reminded that child development results from the interplay of biology and society, from the "characteristics children bring with them into the world and the way the world treats them" (Garbarino & Ganzel, 2000). Because children are embedded within multiple social systems, an accurate and comprehensive understanding of their school readiness requires that attention be given to family and contextual factors that bear on their developing competence. In Part II of the current study, the extent of family support and stimulation provided to high-risk youngsters from the preschool years to the time they make their entry into school is investigated.

Part II: Maternal attempts to support the learning competence of their offspring from preschool age to the early grades

The results of Part I, by highlighting the continuity in children's functioning, suggested that the context in which the risk status of some children initially unfolds during the toddler and preschool years may still operate as children make their transition into school, contributing to the stability in child outcomes. Part II of the current study directly examined this hypothesis, by investigating maternal provisions of support and stimulation from the preschool period to the early grades.

Parenting is viewed as a critical mechanism underlying the transfer of psychosocial risk across generations (Caspi & Elder, 1988a, 1988b; Patterson, 1998; Rutter, 1998). Individuals considered at risk as a function of family background or long-standing behavioral and personality characteristics are thought to face challenges in their adaptation to important life transitions (Caspi, 1993; Caspi, Bem, & Elder, 1989). They may have fewer positive interpersonal contacts as well as more limited educational and occupational opportunities to face life challenges and stressful events. In turn, their stressful life conditions may affect the interactions and parenting environments that they provide to their offspring. Ultimately, these parenting difficulties are thought to impact on the development of the next generation (Serbin & Stack, 1998).

Previous findings from the Concordia Longitudinal Risk Project (Serbin et al., 1998; Saltaris et al., 2002) and other investigations of high-risk individuals (Brooks-Gunn, Klebanov, & Liaw, 1995; Crnic & Greenberg, 1990; Dodge et al., 1994) have begun to illustrate the ways in which a history of psychosocial difficulties and

psychological distress can affect parenting skills with young offspring. In general, mothers struggling with mental health issues or lacking personal and material resources display less sensitive and more controlling parenting practices than other mothers. They are also less competent at providing a stimulating and supportive home environment for their children (Goodman & Brumley, 1990). During earlier visits made to the homes of Concordia participants when the target children were toddlers and preschoolers, mothers' history of lower socioeconomic status and concurrent psychosocial problems (including limited social support and increased parenting stress) predicted lower levels of emotional availability, cognitive stimulation, and overall support in the home environment (Bentley, 1997; Cooperman, 1999; Saltaris et al., 2002). These aspects of parenting were shown to be related to children's adjustment during the preschool years, including their cognitive competence (e.g., Saltaris et al., 2002).

As the target children were making the transition into school, it became important to examine aspects of parenting considered to be especially relevant at this stage in children's development. Children trying to adapt to the novel demands of school can benefit from their parents' support both at home and in school. In the home context, parents can help their offspring by offering diverse learning opportunities adapted to children's age and level of development, providing structure and monitoring in order to facilitate curriculum acquisition and homework completion, and exhibiting warmth and sensitivity in order to promote children's confidence and self-reliance as learners (McCullough, 2001). In parallel to support in the home, parents can also promote children's competence by establishing a positive working relationship with the school.

Specifically, regular contacts with teachers, endorsement and comfort with the school, and involvement in school activities are all associated with positive outcomes for children, including higher achievement and greater socio-emotional maturity (e.g., Epstein, 1996; Midgett & Midgett, 2001). In the current study, both of these aspects of parenting were studied within our sample of high risk families.

The predictors examined were selected based on the assumption that a variety of factors can bear on parenting skills, from more distal aspects of the parenting context to more proximal personal characteristics. The underlying hypothesis tested within the current study was that broad contextual factors influence parenting skills, but that their impact is to some extent mediated by more direct predictors (Felner et al., 1995). Specifically, the independent variables for these analyses included (a) family income, (b) maternal education, (c) maternal hardship (including marital status, parenting stress, satisfaction with social support, and symptomatology), and (d) mothers' parenting skills at preschool age, as measured by their direct cognitive stimulation, overall support in the home, and discipline style.

Family income and maternal education have been repeatedly linked to marked individual differences in the quality of support and stimulation provided by mothers to their young offspring (Furstenberg et al., 1987). These differences are generally attributed to the material and intellectual resources that mothers have available in order to help their children acquire learning strategies and problem-solving skills. In parallel, mothers' ability to assist their offspring in making the transition into school is likely to depend on their socio-emotional functioning and the support they receive. In general, mothers who

are raising their children alone, without receiving sufficient social support, are likely to experience greater stress and as such, can appear less sensitive to the needs of their offspring (Cochran & Niego, 1995; Goldstein et al., 1996). In contrast, mothers with greater sources of support and less distress tend to be more available and have more opportunities to get directly involved in their children's schooling (Crnic & Greenberg, 1990; Koeske & Koeske, 1990). At the time of our last visits to the participants' homes, when the target children were toddlers and preschoolers, aspects of maternal hardship were already found to affect the provision of support and stimulation. For instance, maternal reports of parenting stress were negatively related to the overall quality of the home environment provided to offspring (see Saltaris et al., 2002).

During the previous phase of data collection, measures of hardship were collected at the same time as those tapping into parenting skills. Consequently, the direction of the links between the two sets of variables was difficult to establish. In the current study, the influence of mothers' personal hardship during the preschool years on their subsequent ability to support their children's learning at school age was examined, thus providing an opportunity to observe the long-term impact of maternal hardship on parenting skills. We also examined the contribution of previous parenting skills on mothers' current efforts to stimulate their children's learning, in order to examine the degree of stability in the support received by young children as they made the transition from being a home child to becoming a school child.

On the basis of our earlier observations and the research presented above, we expected to uncover continuity in the quality of parenting over time, from the preschool

period to the early schooling years. As such, it was hypothesized that parenting skills at preschool age would emerge as the strongest positive predictor of parental support at school age. It was also anticipated that the socioeconomic context of the family and mothers' history of personal hardship would indirectly bear on their parenting skills at this critical time, mostly through their influence on parenting patterns established earlier in children's lives. Specifically, socioeconomic context was expected to be a positive predictor of parenting skills, whereas maternal hardship was posited to represent a negative predictor. For both variables, it was hypothesized that the effect size would decrease once preschool parenting was entered in the regression equations.

Results

When designing analyses for Part II of the current study, hierarchical regression models were chosen as the most appropriate statistical strategy, since they allowed for the examination of the specific contribution of a given predictor, while controlling for the effect of other independent variables. Using this approach, it was possible to examine whether the effect of certain variables entered early in the equation remained significant even after other variables were entered in the model.

Two separate regression analyses using the same sequence of predictors were carried out to examine parental support at home (rated by mothers) and at school (rated by teachers). The order of entry of the predictor variables was based on their level of proximity to the child, i.e., the extent to which they could have a direct effect on children. More distal predictors were entered first (e.g., socioeconomic context, maternal hardship), followed by more proximal predictors (e.g., preschool stimulation). This order

of entry permitted us to assess whether distal predictors had a direct effect on the outcome variable, or whether their effect operated mostly through other factors. Specifically, family income and maternal education were entered together in the first step of the equation, followed by the factor of maternal hardship in the second step, and preschool parenting skills in the last step of the regression equations. The regression equation for home support ($N = 83$) produced a statistically significant multiple correlation ($p < .01$) whereas the regression equation for school support produced a marginally significant multiple correlation ($p < .10$), probably due to the reduced sample size available ($N = 63$). Intercorrelations between predictors and outcome variables are presented in Table 7. Tables 8 and 9 outline the findings from the regression analyses.

When studying maternal support at home, maternal education emerged as a significant predictor ($\beta = .23, p < .05$) when it was entered in the first step of the equation, with higher levels of maternal education predicting greater support and structure in the home as children were going through the challenges of the early grades. When the measure of maternal hardship was entered in the second step, it was found to be negatively related to parenting skills at school age ($\beta = -.30, p < .01$), suggesting that women who had had to face greater personal struggles since becoming mothers were less available and competent at assisting their offspring during the school transition period. In the last step of the regression equation, the variable tapping into mothers' previous parenting skills was entered and had a strong effect on current maternal support at home ($\beta = .43, p < .001$), indicating that mothers who were more competent at promoting their children's development during the preschool years were also better able to meet the

Table 7

Correlation Matrix for the Prediction of Maternal Supportive Behavior at School Age

Variables	1	2	3	4	5	6
1. Family income	---	.47**	-.38**	.46**	.19 [†]	-.01
2. Maternal education		---	-.15	.32**	.27*	.16
3. Mothers' hardship			---	-.45**	-.33**	-.22 [†]
4. Preschool parenting skills				---	.50**	.30*
5. Supportive behavior at home					---	.26*
6. Supportive behavior at school						---

Note. N=83

* $p < .05$. ** $p < .01$. [†] $p < .10$.

Table 8

Regression Analysis Predicting Maternal Supportive Behavior at Home

Variable	β	sr^2	t	R^2_{ch}	F_{ch}
Step 1				.08	3.29*
Family income	.08	.07	.67		
Maternal education	.23	.21	1.93*		
Step 2				.08	7.09**
Family income	-.04	-.03	-.31		
Maternal education	.24	.22	2.08*		
Maternal hardship	-.30	-.28	-2.66**		
Step 3				.13	13.60**
Family income	-.15	-.12	-1.29		
Maternal education	.18	.16	1.66		
Maternal hardship	-.16	-.14	-1.42		
Preschool parenting skills	.43	.35	3.69**		
Total	$R = .53 \quad R^2_{adj.} = .24 \quad F = 7.50^{**}$				

Note. N= 83.

* $p < .05$. ** $p < .01$. *** $p < .001$. [†] $p < .10$.

Table 9

Regression Analysis Predicting Maternal Supportive Behavior at School

Variable	β	sr^2	t	R^2_{ch}	F_{ch}
Step 1				.04	1.17
Family income	-.12	-.10	-.79		
Maternal education	.22	.19	1.53		
Step 2				.05	2.91 ^t
Family income	-.20	-.16	-1.30		
Maternal education	.22	.19	1.56		
Maternal hardship	-.23	-.21	-1.71 ^t		
Step 3				.03	1.38*
Family income	-.24	-.20	-1.60		
Maternal education	.17	.14	1.15		
Maternal hardship	-.14	-.12	-.98		
Preschool parenting skills	.27	.23	1.89 ^t		
Total		$R = .37$	$R^2_{adj.} = .08$	$F = 2.28^t$	

Note. N= 63.

* $p < .05$. ** $p < .01$. *** $p < .001$. ^t $p < .10$.

needs of their offspring once they made the transition into school. When all the predictors were entered in the regression equation, maternal education and personal hardship were no longer significantly related to parenting skills, suggesting that the effect of these variables operated mostly through their links with parenting skills at preschool age.

When predicting maternal support at school (Table 9), the distal variables tapping into family income and maternal education did not emerge as significant predictors. When it was entered in the second step, a history of personal hardship was marginally related to teachers' perceptions of mothers' involvement ($\beta = -.23, p < .10$). This finding suggested that after controlling for SES and maternal education, mothers who had been struggling with psychosocial stress or psychological problems during the preschool years tended to be viewed by teachers as less competent in establishing a positive working relationship with their children's school. When entered in the last step, mothers' parenting abilities at preschool age also contributed marginally to current school involvement ($\beta = .27, p < .10$). This indicated that mothers who were better able to stimulate and support their offspring's development in early childhood tended to be viewed as more available to participate in children's schooling during the early grades. When all variables were entered in the regression equation, parenting skills at preschool age was the strongest predictor (although it was a trend), suggesting that more distal variables such as personal hardship were operating through this more proximal predictor.

Discussion

Consistent with expectations, the findings of Part II of the current study confirmed that parenting skills tend to be fairly stable over time. Within a sample of high-risk mothers with a history of stressful life conditions and personal hardship, the ability and availability to support children's learning at school age was best predicted by mothers' previous attempts at stimulating the learning competence and overall development of their offspring during the toddler and preschool years.

Aspects of mothers' personal adjustment, including their educational attainment and psychosocial hardship (parenting stress, single parenthood, dissatisfaction with social support, psychological symptoms) impacted on their ability to support their children's schooling, mostly through their links with parenting skills measured earlier in childhood. This pattern of findings suggests that the stress and disadvantage affecting the lives of certain high-risk individuals bear on their parenting abilities from an early point in time. Given the powerful influence of parenting on child outcomes during the early childhood years (e.g., Estrada et al., 1987; Steelman et al., 2001), these data suggest once more that parenting represents a critical factor in the transfer of risk status from the parent generation to the child generation.

Within our sample of families from the Concordia Project, it is important to note that family income did not contribute significantly to either measure of maternal support and stimulation. This finding is consistent with recent conceptualizations of disadvantage (Brooks-Gunn et al., 1997), which suggest that poverty is usually not pathogenic in itself. Rather, families from lower socioeconomic backgrounds tend to lack resources and are

confronted with multiple sources of stress, which in turn affect parenting skills, parent-child interactions, and child outcomes.

In the current study, maternal supportive behavior was assessed both from the perspective of mothers themselves and from reports provided by teachers. This feature of the study enabled us to obtain a multi-setting, multi-informant evaluation of mothers' involvement in the schooling process of their offspring. The fact that the same overall pattern of findings emerged in both sets of analyses (albeit not significant in the case of teacher reports, perhaps because of the smaller sample size available), provides evidence for the reliability of these results. There has been a long-standing concern regarding the appropriateness of only using self-reports when examining such outcomes as parenting skills and behaviors (Boyle & Pickles, 1997a, 1997b; Kinsman & Wildman, 2001). Social desirability factors and mothers' personal adjustment may affect the reliability of their reports. By including teacher perceptions in the current research design, there is some preliminary indication that the findings may be consistent across informants.

Taken together, the results of Part II of the current study suggested that within a risk sample, patterns of inadequate parenting established early on in children's lives were maintained as children faced the challenges of the early grades. Children known to be at risk for learning and developmental problems may not receive the support and stimulation they require to successfully make the transition into school. The interplay between child characteristics and family context is likely to ultimately affect children's adjustment during the early grades. Part III of the current study directly tested this notion, by examining a comprehensive model of the multiple sources of influence on the school

transition of high-risk children, including child characteristics, parenting behaviors, and family context.

Part III: An ecological model of the school transition of high-risk children

The findings that emerged from Part I and Part II of the present study served to illustrate, within a sample of families from moderate to high-risk backgrounds, the continuity in children's level of functioning over time, as well as the consistency in the extent of parental support they receive as they strive to become competent learners. In order to accurately predict the success of children's school transition, addressing the progressive and cumulative impact of both child and family factors, while also considering broader aspects of the context in which children evolve, was critical. In Part III of the current investigation, a comprehensive model of the early school adjustment of at-risk children was tested. Within a unique intergenerational sample, the emphasis was on the mechanisms through which children's abilities and characteristics, parents' adjustment, family interactions, and contextual factors combined to affect children during a critical turning point in their young lives.

In recent years, proponents of the ecological and transactional models (Garbarino & Ganzel, 2000; Sameroff & Fiese, 2000a) have brought to the forefront of developmental research the issue of transactions between children and their environment. A call has been made for greater attention to the various social systems in which young children participate, and that have the potential of influencing their developing competence. These social systems include the family, peer group, school, neighborhood, and society to which children belong. Conceptually, these various factors are thought to have an additive effect on child functioning. That is, risk and protective factors within the child and embedded in various social systems are considered to

combine to influence the direction and sequence of future events and the trajectory of children's development over the lifespan (Sameroff & Fiese, 2000a, 2000b; Werner & Smith, 1992). This model, by addressing a wide range of potential influences on children's adaptation, is particularly useful to conceptualize the development of children from risk backgrounds. A few large-scale investigations of vulnerable youngsters (Furstenberg et al., 1999; Sameroff et al., 1998) have provided support for the notion that the accumulation of risk conditions at the child, family, and contextual levels represents the prime determinant of various child outcomes, measured in terms of cognitive, social, or emotional competence.

Recognizing the complexity of potential influences on child development should not preclude the examination of specific predictors of risk and resilience as they relate to various aspects of children's lives. In particular, we still have limited understanding of the specific determinants of competence and maladjustment across the important period of school transition within disadvantaged, high-risk populations. Most of the existing studies focusing on children's school readiness and their adjustment during the early grades examined normative groups of children (Birch & Ladd, 1998; Pianta et al., 1995). The few investigations exploring the early school success of vulnerable children have been rather limited in their scope, often targeting only a few risk factors and neglecting potential buffers (e.g., Entwisle & Alexander, 1990). In order to optimize the development of vulnerable children and design effective preventive interventions, it is essential to identify the most important threats to child functioning over time, as well as the experiences and characteristics which may protect or buffer children growing up

under adverse family, social, or economic conditions. Predictors may exist at different levels of proximity to children, from distal variables with indirect effects on child development, to more proximal and direct influences.

Within the Concordia Longitudinal Risk Project, it was possible to explore the interplay between a number of child, family, and contextual factors potentially involved in the prediction of school transition among high-risk children. The risk and protective variables that were examined were selected to reflect a broad range of influences on child outcomes, from distal factors with posited indirect effects on school success to more proximal predictors. First, descriptive information on aspects of the school context to which the target children were exposed was obtained. A relatively recent line of research has begun to highlight the importance of the quality of the school environment in determining the individual achievement of pupils (Caldas & Bankston, 1997, 1999). Specifically, in schools serving a lower SES population and in those with an elevated proportion of children with learning and adjustment difficulties, the performance of individual pupils tends to be negatively affected compared to children attending less disadvantaged schools (Ma & Klinger, 2000). Although much work is still required to clarify the mechanisms underlying these links, it is possible that marked differences in school climate, quality of education, and material and physical resources contribute to variations in students' achievement between schools.

Within the current study, our aim was to explore characteristics of the learning environment in which the target children evolved during the early grades of elementary school. Specifically, information was collected regarding the SES of children's schools,

the proportion of children in each school successfully meeting grade requirements, as well as the percentage of children who were considered to manifest learning or adjustment difficulties according to criteria established by school boards. Because of significant restrictions in the sample size available for the data on school context, this information was analyzed separately from other factors included in the predictive model of children's school adjustment.

The constructs that were examined within the model included (a) the quality of parenting context, based on the socioeconomic status of the family and mothers' history of hardship, (b) parental support and stimulation at preschool age, (c) parental support and stimulation at school age, and (d) children's preschool abilities and characteristics (preschool IQ and social/behavioral adjustment, child gender, grade placement). Refer to Appendix Y for a description of the factor loadings of variables created to reflect parenting context and children's social/behavioral adjustment at preschool age. Research suggests that each of these factors may represent a particularly important influence on the course of development and competence of vulnerable children (e.g., Duncan, Brooks-Gunn, & Klebanov, 1994). Within the present study, one important objective was to examine the combined effect of these variables on child outcomes and to explore the pathways and mediating variables underlying the longitudinal prediction of school functioning.

The outcome variables that were selected included a composite score of children's academic achievement in language and mathematics as well as a factor tapping into children's social/behavioral maladjustment at school age. The factor of social/behavioral

maladjustment was created by grouping different markers of children's behavioral and interpersonal functioning at school age (refer to Appendix Z for a description of the composite score of school-age social/behavioral maladjustment). Academic performance and social/behavioral functioning are generally interpreted as the two most critical markers of children's adaptation during the early grades. In Part I of the current study, different facets of children's school adaptation were examined, including academic achievement, referral status, and several specific markers of behavioral adjustment (i.e., mothers' and teachers' perspectives of behavioral/interpersonal style, classroom work-related skills). The objective was to gain an in-depth understanding of child readiness indicators predicting various aspects of children's adaptation during the early grades. In Part III, the goal was to test a comprehensive model of school functioning that included child characteristics while also considering family and contextual factors. As such, these two parts of the study were designed to address distinct questions regarding the prediction of children's learning competence over time. Concerns regarding statistical power prevented us from testing these two research questions in the same set of analyses.

Based on conceptual and empirical work suggesting that risk to children can be measured in terms of an additive model, in the current study it was hypothesized that the predictors of school transition that were examined would combine to make a significant contribution to the prediction of academic and behavioral outcomes during the early grades.

Drawing on the work of Bronfenbrenner (1986) and Garbarino and Ganzel (2000), it was posited that risks and protective factors would exist at different levels of proximity

to the child, and that more proximal factors both in time and space (e.g., characteristics within the child such as IQ and social/behavioral competence, and interactions with parents in which the child plays a direct role) would have a stronger impact on child outcomes than more distal experiences that indirectly bear on the development of children but in which they do not play a direct role (e.g., parenting context). With respect to environmental influences on child outcomes, it was expected that experiences and situations occurring earlier in children's lives (e.g., preschool parental stimulation) would exert a less powerful influence on child outcomes than more recent experiences (e.g., school-age parental support and stimulation).

Results

Description of school context. At the time they were originally selected to take part in the Concordia Longitudinal Risk Project, the high-risk parents included in the current study were all attending elementary schools in a lower SES neighborhood of Montréal, Quebec. As their offspring were making their entry into the school system, it was valuable, from an intergenerational perspective, to investigate the characteristics of schools attended by the target children. From the 83 children included in the sample, only 33 pupils were attending schools on the island of Montréal. The remaining children were going to elementary schools in various suburbs of Montréal, which suggests that a significant proportion of participating families have left the city to live in more remote areas.

As a window into the social context to which children were exposed during the early grades, information was collected on the average socioeconomic status of each

school. Data were available on the schools of 43 children. For schools operating under the Commission Scolaire de Montréal (CSDM), the information consisted of an index of disadvantage ranging from 0 to 100 created by the Conseil Scolaire de l'Île de Montréal ("Qui voulons-nous aider?", 2001). Higher scores on this index reflect greater concentrations of disadvantage within any particular school. For the children in our sample attending schools in the CSDM ($N = 22$), the average score on the index was 31.62 ($SD = 14.17$), which falls within the 30% of most advantaged schools within the school board. However, there was a significant degree of variability in SES levels, with scores ranging from 6.99 (10th decile of disadvantage; within the 10% of most advantaged schools of the CSDM) to 62.53 (2nd decile of disadvantage, within the 20% of most disadvantaged schools on the island of Montréal).

Information on SES for institutions in other school boards was provided as the percentage of families within each school who are living below the poverty line.

Information on the schools of 21 of our target children revealed that on average, the income of 30% of families fell under the low-income cutoff ($SD = 10.46$). Again, wide variability in scores was evident, as reflected by a range from 15.95 to 50.69% of families living in poverty.

In order to gain some insight into the characteristics of the student body within each of the schools attended by children in our sample, information was collected on the proportion of pupils in each school passing grade requirements ($N = 45$), and those receiving a code from their school board indicating learning, behavioral, or developmental problems ($N = 68$). The average success rate was 90.78% ($SD = 7.49$, range from 74 to

100%). Although on average the vast majority of children in these schools successfully met grade requirements, in some schools more than a quarter of pupils experienced failure in elementary school (a score that is elevated compared to population norms).

Within the schools of our target children, approximately 11.5% of children were coded to reflect risk for school problems ($SD = 9\%$). The range across different schools was substantial, from 2 to 39.5% of children coded. Of note, within some school boards, children who require specialized services for learning and developmental difficulties are transferred into one institution, thereby reducing the rate of children coded in the rest of schools within that school board.

Taken together, the information presented above indicates that as they made the transition into the early school grades, the children from the Concordia Longitudinal Risk Project were confronted with widely diverse school settings, with some children exposed to fairly disadvantaged school environments. It can be argued that the concentration of poor families in some schools may contribute to a less enriching school context for the children attending these schools, through such factors as lack of stimulation available from peers, lower expectations from teachers, and restrictions in parents' time and monetary commitment to the school (e.g., fundraising activities). It is possible to speculate that this may represent an additional risk factor for scholastic difficulties in children already considered to be at risk for school problems. Although an attempt was made to examine correlations between aspects of the school environment and children's academic and social/behavioral adjustment during the early grades, the limitations in sample size greatly affected the power of these analyses and no statistically significant

relation was uncovered. Consequently, school context was not included in the final model of school adjustment.

Prediction of school adjustment. In order to examine the predictors of children's academic achievement and social/behavioral maladjustment, two separate hierarchical regression analyses using the same sequence of predictors were carried out. This approach to data analysis was deemed particularly useful, because it allowed testing independent variables according to the theoretical predictions presented. Variables considered to reflect more distal influences on school outcomes, both in terms of level of proximity to children (e.g., parenting context) and time at which the experiences took place (e.g., parental stimulation at preschool age) were entered in the regression equations prior to more direct (e.g., child abilities) and recent predictors (e.g., parental stimulation at school age). This order of entry was chosen to examine whether more distal predictors had a direct impact on children, or whether their effect operated through more proximal experiences. When all predictors were entered in the equation, the strength of the regression model could provide an estimate of the cumulative impact of all variables taken together.

Parenting context was entered in the first step of the regression equations. Parental stimulation and support at preschool age was entered next, followed by parental stimulation at school age. In the last step of the regression equations, child characteristics and preschool abilities were examined, including children's gender and grade placement, as well as preschool-age cognitive skills and social/behavioral functioning. Interactions between independent variables were explored in initial preliminary analyses, but were not

retained in final regression equations because they failed to contribute significantly to the prediction of children's school functioning.

Table 10 presents the intercorrelations among predictors and dependent variables. Of interest, the correlation between the two outcomes, academic achievement and social/behavioral maladjustment, was statistically significant ($r = -.42, p < .001$). This suggests that the two outcome variables were related, while also providing unique information on different aspects of children's overall functioning.

Tables 11 and 12 outline the findings from the two sets of regression analyses. Both equations produced statistically significant multiple correlations (p 's $< .001$). In the descriptions of findings below, independent variables are discussed in terms of their predictive power at the step at which they were entered in the equations.

In the regression predicting academic achievement (see Table 11), the factor tapping into parenting context was found to predict children's scholastic abilities when it was entered first into the regression ($\beta = .24, p < .05$), suggesting that children living in families with greater material and emotional resources throughout the preschool years tended to succeed better academically in the early grades. Of note, the impact of parenting context dropped out once the two variables reflecting parental stimulation were entered into the equation, which suggested that broad contextual factors operated on child outcomes mostly through parental behaviors. In the second step of the equation, parents' direct efforts to support the learning competence of their offspring at preschool age did not emerge as a significant predictor of subsequent academic achievement. Yet, parenting at school age, measured as home support and parental school involvement, was

Table 10

Correlation Matrix for the Prediction of Children's School Adjustment

Variables	1	2	3	4	5	6	7	8	9
1. Parenting context	—	.46***	.29**	.42***	.41***	.11	-.05	.24*	-.19 ^a
2. Parenting stimulation at preschool age		—	.36***	.38***	.35***	.09	-.12	.17	-.25*
3. Parenting at school age			—	.16	.12	.06	-.32**	.33**	-.46***
4. Children's preschool IQ				—	.39***	.19 ^a	-.02	.38**	-.34**
5. Children's preschool social behavior					—	.23*	.16	.24*	-.26*
6. Child gender ^a						—	.05	.14	-.39***
7. Grade placement							—	-.27*	.22*
8. Academic achievement								—	-.42***
9. Social/behavioral maladjustment									—

Note. $N = 83$

^a Male = 0. Female = 1

* $p < .05$. ** $p < .01$. *** $p < .001$. ^a $p < .10$.

Table 11

Regression Analysis Predicting Children's Academic Achievement From An Ecological Perspective

Variable	β	sr^2	t	R^2_{ch}	F_{ch}
Step 1				.06	5.02*
Parenting context	.24	.24	2.24*		
Step 2				.00	.35
Parenting context	.21	.18	1.71 [†]		
Parental stimulation at preschool age	.07	.06	.59		
Step 3				.07	6.25*
Parenting context	.16	.15	1.36		
Parental stimulation at preschool age	-.01	-.01	-.08		
Parental stimulation at school age	.28	.26	2.50*		
Step 4				.15	3.82**
Parenting context	.03	.02	.21		
Parental stimulation at preschool age	.13	-.10	-1.05		
Parental stimulation at school age	.22	.20	1.99*		
Child preschool IQ	.31	.26	2.65**		
Child preschool social behavior	.15	.13	1.30		
Child gender ^a	.05	.05	.53		
Grade placement	-.23	-.21	-2.13*		
Total	$R = .53$		$R^2_{adj.} = .21$	$F = 4.13***$	

Note. N= 83.

^a 0 = boys; 1 = girls

* $p < .05$. ** $p < .01$. *** $p < .001$. [†] $p < .10$.

Table 12

Regression Analysis Predicting Children's Social/Behavioral Maladjustment From An Ecological Perspective

Variable	β	sr^2	t	R^2_{ch}	F_{ch}
Step 1				.04	3.15 ^t
Parenting context	-.19	-.19	-1.78 ^t		
Step 2				.03	2.82 ^t
Parenting context	-.10	-.09	-.82		
Parental stimulation at preschool age	-.20	-.18	-1.68 ^t		
Step 3				.15	14.88****
Parenting context	-.03	-.03	-.28		
Parental stimulation at preschool age	-.08	-.07	-.72		
Parental stimulation at school age	-.42	-.38	3.86***		
Step 4				.19	5.85***
Parenting context	.09	.07	.81		
Parental stimulation at preschool age	.01	.01	.09		
Parental stimulation at school age	-.38	-.19	-3.72***		
Child preschool IQ	-.21	-.18	-1.98*		
Child preschool social behavior	-.12	-.10	-1.10		
Child gender ^a	-.32	-.31	-3.43**		
Grade placement	.13	.12	1.31		
Total	$R = .64$		$R^2_{adj.} = .35$	$F = 7.25***$	

Note. N= 83.

^a 0 = boys; 1 = girls

* $p < .05$. ** $p < .01$. *** $p < .001$. ^t $p < .10$.

found to positively predict children's academic outcomes when it was entered in the third step ($\beta = .28, p < .05$). Children receiving greater support from their parents during the early grades were able to meet academic demands more successfully. Finally, when entered in the last step of the equation, children's preschool-age cognitive skills and current grade placement were both associated with academic outcomes (β 's = .22 and -.23, respectively, p 's < .05). Children who scored higher on standardized measures of intellectual functioning at preschool age performed better on measures of language and mathematical ability following their entry into school. In parallel, children in lower grades generally met academic expectations with more success than children in higher grades. When all the predictors were entered into the regression equation, school-age parental stimulation, children's preschool IQ, and current grade placement remained linked to academic outcomes (p 's < .05).

When examining the prediction of children's social/behavioral maladjustment at school age, parenting context emerged as a marginal negative predictor ($\beta = -.19, p < .10$) when it was entered in the first step, suggesting that higher levels of socioeconomic and psychosocial adversity in the family throughout the preschool years tended to be related to less maladjustment in pupils after school entry. In the second step, preschool-age parental stimulation was also found to contribute marginally to the prediction of children's social and behavioral maladjustment ($\beta = -.20, p < .10$). Children who received higher levels of stimulation, support, and positive discipline when they were preschoolers tended to display less disruptive behavior during the early grades than children who received less stimulation early on. When it was entered in

the following step, school-age parental stimulation emerged as a strong predictor of social/behavioral maladjustment ($\beta = -.42, p < .001$), suggesting that parents who invested efforts into supporting their children's learning during the early grades generally had children who adapted better to the demands of school. Finally, when entered in the last step of the equation, the group of child characteristics and abilities made a significant contribution to the prediction of social/behavioral competence. Significant predictors included (a) child gender ($\beta = -.32, p < .001$), with girls exhibiting fewer behavioral problems than boys, and (b) child preschool IQ ($\beta = -.21, p < .05$), suggesting that children who developed better cognitive reasoning skills during the preschool years were also considered to display less social/behavioral difficulties when they entered the school system. When all variables were included in the regression model, parenting at school age, children's gender and their preschool cognitive skills continued to be statistically related to social/behavioral adjustment.

Discussion

The results from Part III of the current study confirmed the prediction that threats to children's development and competence can be measured in terms of an additive risk model. Together, the various factors that were examined as part of a comprehensive model of children's school transition were found to make a significant contribution to the prediction of both academic and social/behavioral outcomes. Of note, the regression equation predicting children's behavioral maladjustment was found to be stronger than the one focusing on academic outcomes ($R^2_{\text{adj}} = .35$ and $.21$, respectively). This finding suggests that within this sample of children vulnerable to

school problems, their risk background affected more significantly the development of their social and behavioral skills than their mastery of the academic curriculum during the first few elementary grades. Early behavioral maladjustment is suspected to have a progressive and cumulative impact on children's later academic outcomes through links with children's work orientation and motivation as well as teacher expectations (Welsh et al., 2001). As such, the current results may provide insights into the early stages of the pathway towards long-term underachievement among high-risk children.

Replication of these findings using longitudinal designs that follow high-risk children throughout their years in elementary school is critical in order to explore the reciprocal links between children's academic abilities and social/behavioral competence over time.

Future studies also need to explore in greater depth the interplay between the personal characteristics and experiences that children bring to school and the context in which they evolve during the early years of formal schooling. The information on school context presented here suggested that the student body varies greatly across schools in terms of socioeconomic background as well as level of academic preparedness and early performance. Over time, this may bear on the social environment of the schools, the expectations for children's performance, and the quality of didactic instruction and extracurricular activities provided to children. Ultimately, children's outcomes may be affected.

Consistent with our predictions, children's personal characteristics and the environmental experiences that directly affected them were found to bear more strongly on their adjustment over time than more distal and indirect factors. Specifically, broad

aspects of the parenting context such as family socioeconomic status and mothers' history of personal hardship were related to children's school outcomes, but their effect appeared to operate through more proximal predictors such as the quality of school-age parental stimulation. This finding supports recent conceptual and empirical work suggesting that contextual disadvantage is not in itself pathogenic for child development, but that instead, it affects the quality of the stimulation and emotional support that young children receive (Brooks-Gunn et al., 1987; Huston et al., 1994).

In the current study, parents' efforts to support their children's learning at school age emerged as a strong predictor of both academic and behavioral outcomes, even after controlling for preschool parental stimulation and child characteristics and abilities. This finding underscores the critical role that parents have in promoting the competence of their offspring even after they have made the transition into the early grades. The current results are in line with previous findings from the Concordia Longitudinal Risk Project highlighting the critical role of parenting in influencing the functioning of young high-risk offspring from infancy onward (see Saltaris et al., 2002; Serbin et al., in press). Taken together, the data emerging from the Concordia project contribute to the characterization of parenting as a key mediating factor in the intergenerational transfer of psychosocial risk.

General Discussion

The current study is one of the first attempts to examine, from a longitudinal perspective, the ecology of high-risk children's school transition. Within a group of children vulnerable to learning problems because of their early functioning and family background, the results of this investigation demonstrate that a number of child, family, and contextual factors from infancy onward combine to predict school outcomes over time. Taken together, the findings from this research endeavor provide strong support for the hypothesis that the roots of academic and social competence in the early grades are established during earlier periods in children's development.

This research project addressed several conceptual limitations and methodological shortcomings of previous work on children's early school adjustment. First, the intergenerational longitudinal sample provided a unique opportunity to study prospectively the early precursors of school adjustment, and to gain an understanding of the processes and mechanisms through which children's school readiness emerged over the course of early childhood. In contrast, the majority of previous studies on school adjustment presented concurrent analyses of social influences on children's adaptation. In addition, by adopting a multidimensional conceptualization of school adjustment and by considering multiple precursors and correlates jointly, the present study offered a more comprehensive perspective on the personal characteristics and experiences that threatened, and alternatively promoted, the school success of children at risk of learning difficulties. Finally, important insights were gained from the fact that the current investigation focused on a sample of families from moderate to high-risk backgrounds.

Previously, research on the school adaptation of high-risk children had largely focused on groups of youngsters and their families facing extreme social and economic disadvantage (e.g., Halle, Kurtz-Costes, & Mahoney, 1997; Reynolds, 1989, 2000). It was unclear whether the conclusions drawn from these studies could be applied to other groups of vulnerable children. The fact that on average, the families from the Concordia Longitudinal Risk Project represented a working poor sample while also exhibiting a wide range of functioning was instrumental in addressing some of these questions.

The current findings provided support for the additive transactional risk model, which is based on the notion that a variety of factors affect child outcomes by contributing cumulatively to a positive or negative trajectory through life (Sameroff et al., 1998; Sameroff & Fiese, 2000a, 2000b). When predicting children's academic and social/behavioral competence during the early grades, it was found that contextual, family, and child factors combined to determine child outcomes. These results are consistent with the conclusions from other large-scale investigations of children's development, including the Rochester Longitudinal Study (Sameroff et al., 1987; Sameroff, Seifer, & Zax, 1982) and the Philadelphia Study (Furstenberg et al., 1999). Both research projects revealed that multiple risk scores were most informative when predicting child outcomes related to physical and mental health, cognitive and academic performance, and behavioral adjustment. Together, this body of work highlights the complexity of influences on children's adjustment in different contexts and at various stages in their life trajectory.

As suggested by Ackerman and colleagues (1999), the limitation of broad risk indexes is that they are not very informative about how overall adversity translates into child outcomes. To address this issue, the current study examined the pathways and mechanisms through which various risks and protective conditions affected school outcomes. This information was deemed essential to identify, amongst the wide range of influences on child outcomes, the direct and indirect precursors and correlates of academic and social/behavioral competence during the early grades. From a preventive intervention perspective, it was especially critical to discern a common core of individual dispositions and sources of support that contributed to growth in individual development.

Home context

One clear finding emerging from the current research project is that broad contextual factors such as the socioeconomic status of the family had little direct bearing on school outcomes. In Part I, family SES predicted only one aspect of children's school adjustment, their work-related skills in the classroom (see Table 3). After the variables tapping into early social behavior and cognitive skills were entered into the regression equation, family SES no longer made an independent contribution to children's working skills in the classroom. This suggests that the effect of SES operated in part through its links with children's preschool abilities.

Insight into the role of financial and material resources on school outcomes was also gained from the second part of the study, which highlighted the relationship between family income and mothers' psychosocial hardship ($r = -.38, p < .01$), described as single parenthood, parenting stress, psychological distress, and decreased social support

satisfaction. Links were established between mothers' hardship, their parenting skills at preschool age, the support and stimulation they provided to their offspring following school transition, and ultimately children's academic and social competence during the early grades. The overall conclusion stemming from these findings is that economic hardship affects children's development and functioning in school through the stressful family conditions that co-occur with limited financial resources. This conclusion parallels those of other investigations focusing on the developing competence of disadvantaged children, which demonstrated that poverty is not pathogenic in itself, and that its impact on child outcomes is mediated by stressful life conditions, diminished parental responsiveness, warmth, and supervision, as well as increases in inconsistent discipline practices and use of harsh punishments (for reviews of studies, see Aber, Jones, & Cohen, 2000; Brooks-Gunn et al., 1997; Hanson, McLanahan, & Thomson, 1997).

Parenting

Similar to other studies of normative and high-risk populations, parenting was found in the current study to represent a strong predictor of children's success during the early grades. The support and stimulation provided by mothers to their school-age offspring made a significant contribution to children's academic and social/behavioral competence. This finding emerged when controlling for the influence of home socioeconomic context as well as children's characteristics and preschool abilities on their school adaptation. These results reveal that parents play a critical role in promoting the competence and overall adjustment of their offspring, even after children have made the transition into the early grades. Following children's entry into school, they are exposed

to a new social setting and new social partners, including teachers and peers (Ladd, 1996). Children also spend increasingly less time with their parents as they advance through school. In the past, it had been suggested that parents' influence on child outcomes diminished significantly as pupils entered elementary school (Zellman & Waterman, 1998). The results from the present investigation challenge this view, and underscore the importance of parental support and stimulation over time. These findings are consistent with a growing body of research illustrating that parental involvement in children's school lives predicts academic achievement and overall adjustment (Mantzicopoulos & Newharth-Pritchett, 1998; Miedel & Reynolds, 1999; Reynolds, 1989; Rogala, 2001; Zellman & Waterman, 1998). Entwisle and Hayduk (1988) provided evidence for the long-term impact of parental school involvement during the early grades, by showing that the influence of parents on children in grades 1 to 3 was linked to the children's reading and mathematics performance four to nine years later, even when controlling for the impact of children's cognitive ability.

Increasingly, the importance of considering different facets of parental involvement is being emphasized. A number of researchers (e.g., Epstein, 1996; Kohl & McMahon, 1999; McCullough, 2001) have invested efforts into developing measures of parental involvement that reflect the multidimensional conceptualization of this construct, including hands-on assistance for homework completion, provision of an intellectually stimulating home environment, and school-based involvement. In the current study, the measures of parenting at school age tapped into mothers' support and monitoring at home, as well as their contacts with teachers and their participation in

school life. Yet, limitations in sample size affected our ability to clearly distinguish the influence of different facets of parent-school involvement on children's adjustment over time. Future research should address the specific impact of various aspects of parental involvement on children's school functioning. Information on which components of parental school involvement are more effective in improving child outcomes would be valuable in informing intervention efforts with both middle-class families as well as disadvantaged and other high-risk populations (Normandeau, 2001; Sui-Chu & Willms, 1996).

There is contradictory evidence regarding the level of parental involvement in economically disadvantaged and minority families. Some researchers contend that high-risk parents are generally not sufficiently involved in the schooling of their offspring, which contributes to lower school achievement among their offspring (e.g., Schultz, 2001). In contrast, other evidence suggests that there are no differences in parental involvement due to sociodemographic factors, and that in fact minority parents tend to place more emphasis on homework and on education in general (Stevenson, Chen, & Uttal, 1990). This suggests that minority and disadvantaged parents may be more likely to become involved in or encourage their child's school work. Given that most of this research has compared African-American and Caucasian parents in the United States, further research using more diverse, cross-cultural samples of high-risk families is needed to clarify the extent to which parents facing economic and psychosocial adversity effectively support their children's school learning. The values, attitudes, and

expectations underlying parental involvement in high-risk families also deserve attention (Reynolds & Gill, 1994; Taylor et al., 1995; Watkins, 1997).

Within the current study of high-risk families, mothers' parenting skills at school age were best predicted by their parenting abilities at preschool age. This finding illustrates that although specific parenting behaviors evolve as a function of children's developing needs and abilities, the level of support and stimulation that mothers provide to their offspring is relatively stable across the childhood years. As such, patterns of parenting established during the earliest periods of children's development appear to bear long-term consequences for parent-child interactions. Early parenting also affects children's competence indirectly, through its links with parenting skills at school age.

Previous findings from the Concordia Longitudinal Risk Project, when the offspring of high-risk individuals were toddlers and preschoolers, suggested that the quality of parenting and parent-child interactions varied as a function of parents' psychosocial risk. Specifically, mothers with a history of psychosocial and economic hardship were found to display less emotional availability when interacting with their toddlers (Bentley, 1997), and to use fewer teaching strategies with their preschool-aged children during a puzzle task (Saltaris, 1999). In turn, parenting was consistently found to relate to children's cognitive, socio-emotional, and behavioral outcomes at various developmental stages, from infancy onward (Saltaris et al., 2002; Serbin et al., 1998).

Taken together, the findings emerging from our investigations of high-risk families contribute to the characterization of parenting as a critical mediating factor in the transfer of risk across generations. Caspi and colleagues (Caspi, 1993; Caspi & Elder,

1988a, 1988b; Caspi & Bem, 1990; Elder, Caspi, & Downey, 1986), Rutter and colleagues (e.g., Quinton & Rutter, 1988), and Patterson and colleagues (e.g., Patterson & Dishion, 1988; Patterson & Bank, 1990) hypothesized that parenting patterns and parent-child relationships account in large part for the persistence of maladjustment and risk over time, and from one generation to the next. The Concordia Longitudinal Risk Project is one of the few prospective, longitudinal investigations of two generations of high-risk individuals that exists, and that can inform us on the mechanisms underlying the intergenerational transfer of risk. As such, our findings regarding the critical role of parenting in the early development of high-risk children should serve as an impetus for further research in this area. Specifically, replication within other high-risk populations is essential. In addition, future studies need to explore the specific parenting behaviors and interactional patterns that represent the most critical predictors of child outcomes at different stages in children's development. An important question to address is whether, as children reach middle childhood and early adolescence, the quality of parenting and family environments become less powerful influences on their overall adjustment, and whether other experiences (e.g., peer group) become more important in mediating the transfer of risk across generations (see Menaghan, Kowaleski-Jones, & Mott, 1997). Finally, the role of fathers in the development of young children, which has been neglected in studies of normative and high-risk populations to date, needs to be considered in future studies of social influences on child competence (see Cooperman, 1999; Fagot, Pears, Capaldi, Crosby, & Leve, 1998).

Child characteristics and abilities

In parallel to parenting, the results from the current study highlighted the important contribution of a number of child characteristics and abilities to school functioning. First, the present investigation replicated the findings from other studies emphasizing cognitive functioning as one of the most critical markers of children's school readiness (Estrada et al., 1987; Ladd, 1996; Reynolds, 1989). Based on data from a 20-year follow-up of black teenage mothers and their firstborn children from the Baltimore Study, Baydar, Brooks-Gunn, and Furstenberg (1993) concluded that preschool cognitive functioning is highly predictive of educational achievement and literacy in young adulthood, even when the effects of family environment (i.e., living arrangements, quality of the home environment, maternal education, and income) as well as early school problems were controlled.

In our analyses focusing on a group of youngsters from moderate to high-risk backgrounds, children's preschool cognitive abilities predicted their subsequent academic success and the likelihood they would be referred for special educational or clinical services (see Part I results). The predictive power of children's IQ scores for their subsequent school performance is not surprising, given that scales of intelligence were originally designed and validated by Binet in the early 1900's to predict children's functioning when they entered school. In the current study, preschool IQ was also related to children's social/behavioral adjustment (see Part III results). The current study went beyond previous work by demonstrating that children's IQ was not only related to their academic achievement, but also to other markers of their adjustment to school.

This conclusion was made possible by the fact that a multidimensional conceptualization of school adjustment was considered in the present research project. In addition, by controlling for the effect of children's early social behavior on their school adjustment, it was possible to confirm that the impact of IQ on scholastic success was not simply a function of behavioral style.

The strong association between children's performance on standardized intellectual instruments during the preschool years and their later school success can be attributed to the underlying reasoning and problem-solving skills that they apply in both contexts. Children who develop good verbal and visual-spatial abilities early on are likely to master elements of the school curriculum more effectively. Alternatively, it is likely that performance on IQ tests in early childhood reflects more than pure reasoning skills, and also provides insight into the child's ability to approach tasks with a positive attitude, to work according to specific guidelines, and to persist in the face of challenges. All these characteristics can assist children in meeting expectations when they enter school, and may contribute to success during the early grades. In the current analyses, the interpretation linking cognitive abilities and work orientation at preschool age is supported by the fact that the correlation between the two constructs was substantial ($r = .50, p < .01$). Not surprisingly, then, the variable measuring children's preschool work-related skills did not make an independent contribution to various aspects of school adjustment when it was considered along with cognitive functioning (see Part I results).

The other aspect of children's early social behavior that was examined, namely preschool behavioral style, was found to predict adaptation at school age. Specifically,

early behavioral style was related to maternal ratings of children's behavioral adjustment at school age, suggesting a high degree of stability in children's competence as it relates to behavior and interpersonal skills (see Table 4). Of note, mothers were selected as informants of children's behavior at both time points. As such, the strong relation between maternal ratings of behavior at preschool and school age may be attributable in part to the fact that mothers' views of their offspring are established early on and do not change greatly across the childhood years. Of concern when relying on parents to evaluate a child's functioning is the fact that parents with psychosocial problems often perceive their children negatively and may report more child behavior problems than other parents (Boyle & Pickles, 1997a, 1997b; Kinsman & Wildman, 2001). Within our sample of high-risk individuals with a history of economic and psychosocial hardship, it is possible that maternal reports of children's behavior were somewhat biased, and therefore not highly informative regarding children's behavioral competence over time. Supporting this interpretation is the absence of a link between children's preschool behavioral style as rated by mothers and their school-age behavioral style as perceived by teachers. Although this finding may be suggestive of lack of stability in children's behavior over time, an alternative explanation is that children's behavior varies across different settings, leading to differences in parents' and teachers' perspectives. To explore these issues more systematically, future studies would benefit from examining children's behavior across time using a multi-informant approach, based on ratings from both parents and external observers at each time point studied.

In addition to preschool abilities in the cognitive and behavioral/interpersonal domains, the current study examined the impact of two other child characteristics on school outcomes, namely grade placement and gender. After controlling for other contextual, family, and child predictors of school success, a significant relationship was uncovered between grade placement and academic achievement. As previously noted, these tentative conclusions regarding the impact of grade placement over time are affected by issues of limited statistical power, and await replication using prospective, longitudinal data sets. Nevertheless, our findings tend to suggest that as high-risk children progressed through elementary school, they encountered greater difficulties in mastering elements of the school curriculum. Expectations regarding skill acquisition and overall academic performance are generally minimal during the early grades. However, the curriculum in elementary school is usually taught in a series of graded steps, and gaps in early learning that go unnoticed may have a lasting influence on children's ability to profit from instruction and to face more challenging demands in later grades (Erickson & Pianta, 1989).

Although children's grade placement and their social/behavioral adjustment were correlated, grade placement did not add to the prediction of social and behavioral outcomes beyond the powerful effects of gender and parenting at school age. Of note, there was a link between grade placement and parenting, such that children in higher grades did not receive as much parental support and stimulation as children in lower grades. This suggests that children vulnerable to school problems received progressively less support from their parents as they faced greater challenges in school. Using a

nationally representative sample of American households, Stevenson and Baker (1987) demonstrated that parents of young children tended to be more involved in school activities than did parents of older children, especially in the case of boys. Together, the data from normative and at-risk populations indicate that most parents understand the importance of early schooling and value their involvement at this point in the child's school career. As children progress through the early elementary grades, parents from different backgrounds may think that their input is less critical, or may feel less competent to help their offspring. Given our data demonstrating the powerful influence of parental involvement on the school adjustment of at-risk children, this pattern of decreased parental support may have critical implications for children's school success over time.

Consistent with the literature on sex differences in child development (Fagot & Leve, 1998; Pellegrini & Blatchford, 2000), child gender emerged as an important predictor of early school adaptation in the current study. Specifically, boys encountered more difficulties adapting to the demands of the early grades. They were more likely than girls to be viewed as requiring special interventions, including grade retention and referral to educational and clinical services. They also exhibited greater social and behavioral maladjustment both at home and in school. Disruptive behavior during the early grades has been shown to represent a long-term risk factor for poor school achievement, delinquency, and school failure, especially among boys (Brier, 1995; Masse & Tremblay, 1999; Tremblay et al., 1992). This pathway of risk is generally understood to originate from the fact that boys display more direct aggression and disruptive behavior than girls (Cairns, Cairns, Neckerman, Ferguson, & Garipey, 1989; Crick & Grotpeter, 1995;

Zoccolillo, 1993). In school, direct aggression such as fighting presents more of a management problem to teachers than the indirect aggression displayed by some girls, such as social manipulation and ostracism. Consequently, the behaviors of boys may be brought to the attention of teachers more often than the behavior of girls, potentially leading to negative expectations and biases on the part of teachers (Fagot & Leve, 1998). There may be a progressive, cumulative impact of boys' early behavioral style on their subsequent academic achievement, operating through quality of instruction as well as children's motivation and work orientation. For this reason, boys are believed to be at greater risk for referrals and academic failure over time (McGee, Williams, & Silva, 1987; Weissberg et al., 1987).

Despite the fact that disruptive boys may be faced with the greatest risk of maladjustment in school, girls exhibiting aggressive tendencies and disruptive behaviors during the early grades are also vulnerable to long-term problems. Data from the Concordia Longitudinal Risk Project have shown that aggressive girls are at elevated risk for a number of psychosocial difficulties over time, including educational underachievement, school dropout, early sexual activity, and teenage motherhood (Serbin et al., 1998).

In the current research, child gender was not associated with marked individual differences in academic achievement during the early grades. This finding is somewhat surprising given the results of national assessments of children's achievement that indicate that girls tend to outperform boys from an early age (Pellegrini & Blatchford, 2000). However, most investigations focused on children in the second stage of

elementary school (grade 3 and higher; see Bouchard, St-Amand, & Tondreau, 1996) and the research projects that examined academic skills during kindergarten and the first few grades of school did not consistently find gender differences in child outcomes (see Christian et al., 1998). It is likely that gender differences emerge at a later point in the school careers of high-risk children. Welsh and colleagues (2001) demonstrated that children's social/behavioral adjustment and their academic achievement are intertwined, and that social competence predicts academic outcomes over time. In the current study, the composite scores reflecting children's social/behavioral maladjustment and their academic performance were related ($r = -.42, p < .001$), suggesting that children exhibiting greater levels of disruptive behavior during the early grades struggled more to master the curriculum in language and mathematics at that time. Because the two constructs were measured concurrently, it was impossible to determine the direction of the links between these two aspects of children's adjustment.

Follow-up investigations are required to examine whether behavioral maladjustment during the early grades has a deleterious effect on academic achievement over time. These data should provide valuable insight into the pathways and processes underlying the emergence of gender differences in academic achievement in the later years of elementary school. Ultimately, these research efforts should help inform educational policies and intervention programs designed to assist the children most at risk of school failure (Ensminger & Slusarcick, 1992; Janosz et al., 1997; Masse & Tremblay, 1999). Although substantial efforts need to be directed towards the prevention of school problems among boys, it is also important to recognize the long-term vulnerability of girls

with early behavioral and academic difficulties, and to address the specific needs of this population (Serbin et al., 1998).

School Context

Future research on the school adjustment of high-risk children also needs to take account of the learning environment in which pupils evolve throughout elementary school. A few studies have begun to demonstrate that schools serving disadvantaged children are disadvantaged schools, in part because the demands for material and educational resources are generally higher in these schools (West & Denton, 2001). In schools with a greater proportion of children from lower SES backgrounds and where many children struggle to meet the academic demands of the early grades, fewer opportunities for stimulation and support from peers, teachers, and parents may be available. In these schools, children at elevated risk for scholastic difficulties are likely to be surrounded by other pupils struggling to master the academic curriculum or exhibiting disruptive behavior in the classroom. As such, support and assistance from peers may be limited. Like in all schools, teachers working in disadvantaged settings are generally responsible for large groups of children and often feel overwhelmed by the challenges of having to respond to many children with different needs. Some teachers may develop negative expectations regarding the long-term success of some pupils with early difficulties. Finally, parents in disadvantaged communities may not have the time or financial resources to contribute to extra-curricular activities that are considered beneficial to the development of young pupils.

The current study made a preliminary attempt to examine characteristics of the student body in the schools attended by our target children. Specifically, it considered the socioeconomic background of the student body in each school, the proportion of students meeting grade requirements, and the proportion of children identified as requiring special services. These constructs were considered to represent markers of the social environment to which children were exposed as they made their entry into school. Based on a growing literature suggesting that the quality of the school environment influences the individual achievement of pupils (e.g., Caldas & Bankston, 1997; Lee, 2000), it was hypothesized that the variables measured in the current study would add to the prediction of academic and social competence within our sample of high-risk children facing school transition.

Although some interesting descriptive information was obtained on the schools of the children studied, a number of methodological difficulties limited the insights that could be gained from this research initiative. First, it was difficult to ensure the cooperation of school boards when trying to obtain official reports detailing school SES and characteristics of the student body. Lack of collaboration was manifested by the failure of a number of school boards to return our phone calls or send the information they agreed to provide. Busy schedules and competing demands may have contributed in part to the low response rate. Some of the school board representatives that were contacted raised concerns regarding the confidentiality of the information requested. In those cases, we provided a written summary of the purposes of the research project attesting to the fact that no identifying information on children or schools would be used.

An additional factor complicating data collection was the fact that the information requested from school boards was not always available in the same format, limiting comparisons across schools belonging to different school boards. For example, some school boards did not calculate the proportion of children in each school meeting grade requirements, but instead compiled the percentage of children in each grade who were older than expected. Because this could be attributed to many different factors other than school failure (e.g., illness), these data could not be used as a substitute for the proportion of successful children in each school.

Together, these various methodological difficulties placed restrictions on the sample size available and the types of statistical analyses that could be run in the current study. Despite the challenges attached to the study of school context, it appears important to pursue this line of research in years to come, in particular when examining the life course trajectory of children from moderate to high-risk backgrounds. Future research efforts would benefit from the development of standardized instruments tapping into different aspects of school context, including the material resources and extra-curricular activities made available to children, the stimulation received from teachers, and the mutual cooperation between peers. A few measures of school context are already available, but most of these instruments focus exclusively on the construct of school climate, and are best applicable to high schools (e.g., Instructional Climate Survey, see Worrell, 2000). There is a need for broader measures of school context that would enable researchers to investigate several aspects of school context, including social climate, support from teachers and peers, and material resources. One suggestion is to create a

measure, observational in nature, based on the HOME Inventory of the quality of home environment (Caldwell & Bradley, 1984). The instrument examining quality of the school environment could be completed by researchers when they visit children in their schools to conduct formal developmental and academic assessments. This type of instrument would allow researchers to be less reliant on school boards and to move away from static markers of the quality of school context such as socioeconomic status. This way, more concrete and proximal influences on children's functioning in school could be explored.

Directions for Future Research

Future studies on the ecology of children's school transition would need to consider other settings and social networks in which children participate, and which may bear on their learning competence across the early school years. In particular, the impact of daycare programs on the development of children's problem-solving skills and social/behavioral adjustment has been the focus of increasing attention in recent years (Burchinal et al., 2000; Caughy, DiPietro, & Strobino, 1994; DiLalla, 1998; Field, 1991; Peisner-Feinberg et al., 2001). In the current study, little information was available on children's daycare experiences. Using maternal reports, it was established that approximately 39% ($N = 32$) of the sample had been in daycare, but little information on the duration of daycare participation and the type of daycare setting could be reliably obtained. There is growing recognition that participation in quality daycare programs promotes the developing competence of low-income and other high-risk children, potentially because it supplements their impoverished home environments (Barnett,

1998; Burchinal, Lee, & Ramey, 1989; Reynolds, Mavrogenes, Bezruczko, & Hagemann, 1996). As such, researchers are beginning to examine the contribution of daycare participation to children's school adjustment, and to explore additive and interactive links with other child, family, and contextual predictors of school outcomes (see Peisner-Feinberg et al., 2001).

An additional aspect of children's social ecologies that may bear on their early school adjustment is the peer group they establish following school entry. Ladd (1990, 1996) examined the relation between children's peer relations in kindergarten classrooms and their overall school adjustment over time. Specifically, children with more classroom friends at school entrance developed more favorable perceptions of school by the second month, and children who maintained these relationships tended to like school better as the year progressed. Children who made more new friends in the classroom increased in school readiness over the school year. In addition to friendships, linkages were established between children's classroom acceptance and their overall school adjustment, including school perceptions, school avoidance, and scholastic readiness (see Ladd, 1996). From this body of work, it is clear that children's peer relations represent a critical marker of their overall school adjustment. Further research on the precursors and correlates of peer relations in the context of ecological models of school readiness is thus warranted, especially within high-risk populations. A multi-informant approach, tapping into teacher, parent, and child perceptions of peer relations, is likely to yield the most informative data.

Implications for Research, Practice, and Social Policy

The current investigation was designed to provide insight into the challenges and opportunities facing vulnerable children that influenced their functioning during a critical period in their life course trajectory. The findings from this research project have implications for future research, practice, and social policy related to the school readiness of at-risk children.

With respect to research, the current study represented one of the first initiatives to apply an ecological perspective to the study of school transition in children from moderate to high-risk backgrounds. By recognizing the wide range of potential influences on school outcomes, we were able to gain a greater understanding of the complex interplay of risk and protective factors affecting the developing competence of vulnerable children, and to explore processes and pathways underlying trajectories of risk and resilience. However, data were only available on a small subset of children and their families from the Concordia Longitudinal Risk Project, and some difficulties in ensuring the collaboration of teachers and school boards placed restrictions on the hypotheses that could be tested in this study. Despite these limitations, the richness of the information gained from this investigation should serve as an impetus for other researchers to stay away from simplistic models of school readiness focusing only on a few predictors. In fact, future studies on early school adjustment should further explore the cumulative impact of various social systems by including multiple time points in their study designs. This will allow to chart the functioning of young children over time, examine continuities and discontinuities, and identify critical turning points.

The current research findings on school readiness within a “working poor” sample also have implications for the conceptualization of disadvantage and risk in future empirical work on vulnerable children and their families. Although most of the children studied did not come from extremely poor and disadvantaged backgrounds, a significant proportion of them struggled to meet the challenges of the early grades. Given that the majority of previous studies on high-risk populations focused on families facing extreme and persistent disadvantage, it will be important in years to come to conduct more investigations examining the particular challenges facing “working poor” families and the consequences for children’s functioning. Precise criteria will be required to define different types and levels of economic hardship. The conclusions from such studies will allow psychologists to inform policy makers on the factors promoting the adjustment and well-being of a growing segment of our population.

Within a group of children vulnerable to school problems, the results of the current study identified a number of factors that protected pupils against school failure and maladjustment. In particular, children’s early cognitive functioning and problem-solving skills as well as the parental support and stimulation they received during the early grades were found to help children face the challenges of the early grades. These two factors should thus be considered as potential targets for preventive interventions. A number of early intervention programs focusing on these factors already exist, and will be reviewed next.

To this day, the literature on early intervention programs for children at risk for school failure has largely focused on groups of minority children from the United States

experiencing extreme social and economic deprivation (e.g., Barnett, 1998; Ramey & Ramey, 1998; Weikart, 1998). Only a few Canadian models of preventive interventions exist, such as the “Better Beginnings, Better Futures” program in Ontario (Peters & Russell, 1996). Both large-scale public early childhood programs such as Head Start and Chapter I (Barnett, 1995; Puma & Connell, 2001), and university-based model programs such as the Abecedarian Project, Project Care, the Infant Health and Development Program (IHDP; Burchinal et al., 1997; Campbell & Ramey, 1994, 1995; Ramey & Ramey, 1998), and the High/Scope Perry Preschool Study (Weikart, 1998), were designed to meet the needs of extremely poor children. These programs generally offer center-based education services to high-risk children before age 5. Some of the more intense interventions also provide home visits during the preschool years (e.g. High/Scope Perry Preschool Study; Weikart, 1998) and following school entry (e.g., Abecedarian program; Campbell & Ramey, 1994) in order to increase the participation of high-risk parents in the school lives of their children.

The assumption underlying the development of these programs is that in low socioeconomic status families, children receive insufficient or inappropriate stimulation, which hampers their cognitive growth and the development of their school readiness (Campbell & Ramey, 1995; Ramey & Ramey, 1998). Preschool intervention programs are thought to enhance cognitive development and to lead to a greater transfer of cognitive-academic skills to the school setting (Ceci, 1991). In turn, early academic success predicts higher levels of academic confidence and motivation, and reduces the likelihood of school dropout.

Research findings on the effectiveness of these programs have shown that early childhood education produces immediate effects on the cognitive functioning of children in poverty (Haskins, 1989). The magnitude of this effect is about 0.5 standard deviations, equivalent to about 8 IQ points (Barnett, 1998). There is less agreement about the long-term effects of early intervention programs. The most common conclusion is that while effects on cognitive development decline after children leave the programs and are eventually lost altogether, some effects persist on measures of school success such as grade repetition and special education placements (Barnett, 1995; Campbell & Pungello, 1999; Reynolds et al., 1996).

A number of researchers and policy makers have wondered as to why long-term effects on school success should persist if cognitive effects do not, and despite wide speculation, few definite conclusions have been reached to this day (see Reynolds et al., 1996). More work is needed to identify the mechanisms and processes through which early programs operate to promote overall school adjustment. It may be that children receiving early education benefit not only in terms of their cognitive functioning but also with respect to their learning-related social behavior, including their work-related skills, motivation, and positive attitude towards learning. In turn, the fact that children display more autonomy contribute to more positive views and expectations on the part of parents and teachers, and ultimately to more support as children face the challenges of the early grades.

Future studies on the effectiveness of childhood intervention programs need to emphasize more heavily critical issues related to timing, duration, and intensity of the

services offered. In particular, some scholars have noted that Head Start and other large-scale government efforts may not be able to reproduce the long-term results of high-priced model programs operated by universities such as the Abecedarian Project and the IHDP program (Barnett, 1998; Haskins, 1989). In addition, there is a need to explore the separate and combined effect of child-based and family-based interventions on children's school adjustment. Currently, the evidence regarding family-focused programs is mixed (see Campbell & Ramey, 1994). It appears clear that less intense, home-based interventions that focus solely on parent education do not promote long-term child positive outcomes to the same extent as programs that involve both home visits and child care interventions (Burchinal et al., 1997; Campbell & Ramey, 1995; Olds & Kitzman, 1993). What is less clear, however, is whether family support contributes to child readiness beyond the impact of early child-focused education. Recent research by Reynolds et al. (1996) indicated that accounting for children's cognitive readiness, parent involvement in school independently mediated the effects of preschool intervention on subsequent school adjustment. Within a sample of low-income, minority children in the Chicago inner-city, parent involvement in school was significantly associated with preschool participation and was an independent predictor of both grade retention and school achievement. These findings suggest that within disadvantaged, high-risk families, preschool intervention programs that target parent participation as one of their goals may help to improve parents' sense of efficacy in helping their children learn. It may also improve the quality of parent-child interactions and stimulation in the home.

Because the majority of studies on the effectiveness of early intervention programs have focused on samples of highly disadvantaged, minority children in American inner-cities, the generalizability of findings constitutes an issue. From the data currently available, it is impossible to separate the effects of poverty from those of cultural forces that have a long history in the United States (Campbell & Ramey, 1994). Drawing from the broader conceptualization of disadvantage and risk put forth in the current work, it is imperative to conduct investigations of the effectiveness of early intervention programs within more diverse samples of vulnerable children. In addition, there is a need to develop, implement, and test preschool programs more adapted to Quebec's cultural and socioeconomic reality. Some efforts in this direction are currently underway (e.g., 1-2-3, Go!; Bouchard, 1999).

The conclusions from the current investigation can serve to make several recommendations regarding policies designed to promote the learning competence of the most vulnerable children in our society. First, greater accessibility to early education and stimulation programs appears critical. Currently, in the province of Quebec, a number of early intervention programs are offered in hospital and clinical settings, and are designed to address the specific needs of children with developmental delays and severe behavior problems. In parallel, the Centres de la Petite Enfance (CPE) have been implemented by the Quebec government to offer accessible quality daycare to all children in the province, and preschool programs for 4-year-olds are offered in many elementary schools in disadvantaged neighborhoods. These attempts to expose children to a structured and stimulating environment early on reflect a growing recognition among policy makers of

the importance of early education. However, there is a need to build on these efforts and to add resources to the services already offered. Currently, issues of accessibility represent a significant concern, as long waiting lists exist for admission into the Centres de la Petite Enfance and preschool programs. In addition, the CPE do not specifically target the needs of children considered at risk for school problems because of their family background and early functioning. In parallel to universal programs, preventive interventions would need to be offered more systematically to vulnerable children, similar to what is done in the United States. Cost-benefit analyses have demonstrated the long-term advantages of investing in early intervention programs for high-risk populations (e.g., Weikart, 1998).

Once high-risk children reach school age, their overall adjustment appears to vary according to the experiences and opportunities that are available to them in the school setting. The fact that schools serving disadvantaged children tend to be disadvantaged schools with respect to the stimulation and support offered to children, the extra-curricular activities available, and the physical properties of school buildings and playgrounds (Cadotte, 2002; West & Denton, 2001) is likely to perpetuate a cycle of risk and disadvantage over time. In order to break this cycle, policies regarding the better redistribution of funds and resources to Quebec schools are critical. The provincial government is already providing more financial assistance to schools in lower socioeconomic neighborhoods. Greater financial investments designed to improve the physical properties of school settings and to increase the number of teachers and school

professionals (e.g., speech therapists, psychologists, tutors, shadows, etc.) would undoubtedly be beneficial.

However, providing all children with equal opportunities for scholastic success cannot be solely achieved through greater financial investments. It appears important to consider the value of reforming well-established educational policies in order to promote the stimulation and support made available to all high-risk children in their school setting. A first issue deals with the composition of Quebec schools. Because of practical questions related to the transportation of children, elementary school students generally attend their neighborhood school. In certain low-income areas, this policy has led to the concentration of disadvantaged children in a few schools. Increasing the diversity of the student body by mixing children from different backgrounds would help to limit segregation and would ensure a better distribution of resources among all school-age children. In the United States, voucher programs are being implemented in several states in order to provide parents from inner-city, lower SES backgrounds the opportunity to send their children to a range of schools, including suburban public schools and private schools. Preliminary findings indicate that voucher students show a small but statistically significant improvement in their achievement scores in language and science (Metcalf, 1999). Although early results appear promising, there is still controversy over voucher systems. Firm conclusions await more systematic research on the long-term impact of these programs.

Another issue of concern is that of grade retention as a method of remediation of poor academic performance and socio-emotional immaturity. Grade retention refers to

the practice of non-promotion of students to the next grade upon completion of the school year. For years, many Quebec educators and policy makers believed that this was an effective solution to school failure or maladjustment, and that it constituted a desirable practice in order to maintain grade-level standards and accountability of students (see Jimmerson et al., 1997).

After decades of research, the evidence on the effects of grade retention suggests that it does not improve children's academic achievement or school adjustment over time relative to their non-retained peers. On the contrary, research reviews show significant negative effects of grade retention on academic performance as well as affective outcomes (Holmes, 1989; McCoy & Reynolds, 1999; Reynolds, 1992). Controlling for family background and prior achievement, retained children generally have lower standardized test scores and academic grades than non-retained children. Retained children also have a higher incidence of special education placements, enrollment in alternative educational programs in high school, and school dropout (McCoy & Reynolds, 1999; Reynolds, 1992). Children who are retained lose their classroom peer group and may face negative expectations from teachers and rejection from classmates. Over time, this may contribute to disengagement and withdrawal from school (Reynolds, 1992).

A few studies have examined characteristics of children who tend to be retained (e.g., Dauber, Alexander, & Entwisle, 1993; Jimerson et al., 1997). From this body of work, it appears that the strongest predictors of retention are gender (boys are more likely to be retained), early school underachievement, lower parent education and socioeconomic status, and lower parental involvement with the school. What this

suggests is that the decision to retain a child may not simply reflect the child's struggles with the school curriculum, but also represents a complex decision-making process that is influenced by children's family background, as well as by the views of parents, teachers, and school officials. As such, retention policies may often work against children from the most disadvantaged homes and schools. Retention can thus be viewed as an experience perpetuating the cycle of disadvantage and risk in which some vulnerable children embark during the earliest periods of their development. Given the substantial costs of paying for the extra years of school necessitated by retained children (see Jimerson et al., 1997), alternatives to retention should be considered. For example, providing tutoring and summer school programs and altering the instructional method would be preferred interventions in order to promote the academic and social competence of children exhibiting learning difficulties.

Of note, the educational reform recently presented by the Quebec Ministry of Education (see www.meq.gouv.qc.ca) made important headway in finding alternatives to grade retention as the response to school underachievement and failure. Within the new educational system, the six grades of elementary school are replaced by three cycles, each lasting two years. Educational objectives are established for each cycle. By allowing children more time to achieve particular academic goals, the new system is designed to limit failure and promote children's school motivation and self-esteem. Given that this reform was introduced in the 2000-2001 academic year, its long-term impact has not yet been studied.

Concluding Comments

In the early 1990's, governments from North American countries committed to grand objectives regarding the future of children in the 21st century. In Canada, a firm pledge was made to reduce and ultimately eliminate childhood poverty as a way to provide equal opportunities to all. In a unanimous all-party resolution adopted on November 24, 1989, the House of Commons declared that it sought "to achieve the goal of eliminating poverty among Canadian children by the year 2000"

(www.campaign2000.ca/about/). The U.S. federal government, in a statement of National Education Goals in 1990, indicated that "by the year 2000, all children in America will start school ready to learn" (see Zill, 2001).

Results from the present study reinforce the notion that as a function of early functioning and family background, some children come to school unprepared to meet the challenges and expectations of this setting. Evidence was obtained in support of child, family, and contextual factors that combine over time to influence the academic and social competence of at-risk children. In order to reach societal goals of success for all children, future work in this area must continue to address protective conditions within children and in the multiple social systems in which they are embedded.

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Appendix A

Ratings of Child Behavior During Testing

Ratings of Child Behavior During Testing

The examiner rates children's behavior during administration of the intelligence scale by circling the appropriate number on the scale below. The ratings should be made on completion of the test and be based solely on the examiner's observations during test administration. The examiner should refer to her summaries of children's test behavior for assistance in making the ratings.

1-Never.....2-Occasionally.....3-Sometimes.....4-Frequently.....5-Always

- | | | | | | |
|---|---|---|---|---|---|
| 1. The child requires encouragement from examiner to initiate task. | 1 | 2 | 3 | 4 | 5 |
| 2. The child seems to derive intrinsic pleasure from completing the tasks. | 1 | 2 | 3 | 4 | 5 |
| 3. The child requires encouragement from the examiner to persist on tasks. | 1 | 2 | 3 | 4 | 5 |
| 4. The child appears nervous/anxious during testing. | 1 | 2 | 3 | 4 | 5 |
| 5. The child appears confident in his/her competence or ability to solve tasks. | 1 | 2 | 3 | 4 | 5 |
| 6. The child demonstrates flexibility/adaptability in his/her problem-solving approaches. | 1 | 2 | 3 | 4 | 5 |
| 7. The child appears relaxed during testing | 1 | 2 | 3 | 4 | 5 |
| 8. The child is responsive to the examiner's praise | 1 | 2 | 3 | 4 | 5 |
| 9. The child respects the limits placed upon his/her behavior by the examiner. | 1 | 2 | 3 | 4 | 5 |
| 10. The child complies with the examiner's directives | 1 | 2 | 3 | 4 | 5 |
| 11. The child appears withdrawn. | 1 | 2 | 3 | 4 | 5 |
| 12. The child shows a reflective (as opposed to impulsive) style of responding to items. | 1 | 2 | 3 | 4 | 5 |

- | | | | | | |
|--|---|---|---|---|---|
| 13. Task directions need to be repeated. | 1 | 2 | 3 | 4 | 5 |
| 14. The child relies on trial and error to solve tasks | 1 | 2 | 3 | 4 | 5 |
| 15. The child benefits from instruction on difficult items. | 1 | 2 | 3 | 4 | 5 |
| 16. The child makes impulsive/careless errors in completing the tasks. | 1 | 2 | 3 | 4 | 5 |
| 17. The child demonstrates awareness of his/her errors | 1 | 2 | 3 | 4 | 5 |
| 18. The child demonstrates a willingness to compromise during interactions with the examiner. | 1 | 2 | 3 | 4 | 5 |
| 19. The child acknowledges difficulties in completing some tasks. | 1 | 2 | 3 | 4 | 5 |
| 20. It is necessary for the examiner to place firm limits on the child's behavior during testing. | 1 | 2 | 3 | 4 | 5 |
| 21. The child shows good concentration/focused attention in completing tasks. | 1 | 2 | 3 | 4 | 5 |
| 22. The child is persistent in solving tasks | 1 | 2 | 3 | 4 | 5 |
| 23. The child expresses frustration in developmentally inappropriate/disruptive ways (e.g., throwing test materials, making loud sounds, covering the eyes). | 1 | 2 | 3 | 4 | 5 |
| 24. The child is organized in his/her approach to solving tasks. | 1 | 2 | 3 | 4 | 5 |

Appendix B

French Translation of the Child Behavior Checklist-Parent Version

CBCL-4/18 (Achenbach, 1993)

Rempli par: Mère Père

Voici une liste d'items décrivant les enfants. En vous basant sur le comportement de votre enfant au cours des 6 derniers mois, veuillez encercler:

- 2 --> si l'item est très vrai ou souvent vrai pour votre enfant
 1 --> si l'item est quelquefois vrai pour votre enfant
 0 --> si l'item n'est pas vrai pour votre enfant

Assurez-vous à tous les items, au meilleur de votre connaissance, même si certains ne semblent pas s'appliquer à votre enfant.

- | | |
|--|---|
| 1. Agit trop jeune pour son âge 0 1 2 | 20. Détruit ses propres objets 0 1 2 |
| 2. Allergie 0 1 2
(décrire) _____ | 21. Détruit les objets appartenant à sa famille ou aux autres enfants 0 1 2 |
| 3. Argumente beaucoup 0 1 2 | 22. Est désobéissant(e) à la maison 0 1 2 |
| 4. Asthme 0 1 2 | 23. Est désobéissant(e) à l'école 0 1 2 |
| 5. Se comporte comme l'autre sexe .. 0 1 2 | 24. Ne mange pas bien 0 1 2 |
| 6. Fait caca en dehors des toilettes ... 0 1 2 | 25. Ne s'entend pas avec les autres enfants 0 1 2 |
| 7. Se vante 0 1 2 | 26. Ne semble pas se sentir coupable après une mauvaise action 0 1 2 |
| 8. Ne peut se concentrer ou porter attention longtemps 0 1 2 | 27. Facilement jaloux(se) 0 1 2 |
| 9. Ne peut s'arrêter de penser à certaines choses, obsessions 0 1 2
(décrire) _____ | 28. Mange ou boit des choses qui ne sont pas comestibles 0 1 2
(décrire) _____ |
| 10. Ne peut s'asseoir tranquille, est agité(e) ou hyperactif(ve) 0 1 2 | 29. Craint certains animaux, situations ou places autres que l'école 0 1 2
(décrire) _____ |
| 11. S'accroche aux adultes, ou est trop dépendant(e) 0 1 2 | 30. Craint d'aller à l'école 0 1 2 |
| 12. Se plaint de solitude 0 1 2 | 31. Craint de penser ou faire quelque chose de mal 0 1 2 |
| 13. Est confus(e) ou semble être dans la brume 0 1 2 | 32. Sent qu'il/elle doit être parfait(e) .. 0 1 2 |
| 14. Pleure beaucoup 0 1 2 | 33. Sent ou se plaint que personne ne l'aime 0 1 2 |
| 15. Est cruel(le) envers les animaux ... 0 1 2 | 34. Pense que les autres lui en veulent. 0 1 2 |
| 16. Est cruel(le), brutal(e) ou mesquin(e) envers les autres 0 1 2 | 35. Se sent inférieur(e) ou bon(ne) à rien 0 1 2 |
| 17. Rêvasse ou se perd dans ses pensées 0 1 2 | 36. Se blesse souvent, a souvent des accidents 0 1 2 |
| 18. Se fait volontairement mal ou tentative de suicide 0 1 2 | 37. Se batte souvent 0 1 2 |
| 19. Demande beaucoup d'attention 0 1 2 | |

38.	Est fréquemment taquiné(e)	0 1 2	59.	Joue avec ses organes sexuels en public	0 1 2
39.	Se tient avec des enfants qui attirent le trouble	0 1 2	60.	Joue trop avec ses organes sexuels ..	0 1 2
40.	Entend des choses imaginaires (décrire)	0 1 2	61.	Fait mal ses travaux scolaires	0 1 2
41.	Est impulsif(ve) ou agit sans réfléchir	0 1 2	62.	Est maladroit(e) ou mal coordonné(e)	0 1 2
42.	Aime être seul(e)	0 1 2	63.	Préfère jouer avec des enfants plus vieux	0 1 2
43.	Ment ou triche	0 1 2	64.	Préfère jouer avec des enfants plus jeunes	0 1 2
44.	Se ronge les ongles	0 1 2	65.	Refuse de parler	0 1 2
45.	Nerveux(se), tendu(e)	0 1 2	66.	Répète souvent certains gestes, compulsions	0 1 2
46.	Mouvements nerveux ou tics (décrire)	0 1 2	67.	Se sauve de la maison	0 1 2
47.	Cauchemars	0 1 2	68.	Hurle ou crie beaucoup	0 1 2
48.	N'est pas aimé(e) des autres enfants	0 1 2	69.	Renfermé(e), garde les choses pour lui/elle	0 1 2
49.	Constipé(e)	0 1 2	70.	Voit des choses imaginaires (décrire)	0 1 2
50.	Très craintif(ve) ou anxieux(se) ...	0 1 2	71.	Centré(e) sur lui/elle même ou facilement embarrassé(e)	0 1 2
51.	A des étourdissements	0 1 2	72.	Déclenche des feux	0 1 2
52.	Se sent trop coupable	0 1 2	73.	A des problèmes sexuels (décrire)	0 1 2
53.	Mange trop	0 1 2	74.	Fait le "clown" ou se pavane	0 1 2
54.	Est toujours fatigué(e)	0 1 2	75.	Timide	0 1 2
55.	Est trop gros(se)	0 1 2	76.	Dort moins que les autres enfants .	0 1 2
56.	Problèmes physiques sans cause médicale apparente	0 1 2	77.	Dort moins que les autres enfants durant le jour et la nuit	0 1 2
	a. fièvre ou douleurs	0 1 2	78.	Joue avec ses excréments	0 1 2
	b. maux de tête	0 1 2	79.	Problème de langage (décrire)	0 1 2
	c. nausées, se sent malade	0 1 2			
	d. problèmes aux yeux (décrire)	0 1 2	80.	Regard vague, dans le vide	0 1 2
	e. éruption, rougeurs ou autres problèmes de peau	0 1 2	81.	Vole à la maison	0 1 2
	f. troubles d'estomac, crampes	0 1 2	82.	Vole à l'extérieur de la maison	0 1 2
	g. vomissements	0 1 2			
	h. autres	0 1 2			
	(décrire)				
57.	Attaque physiquement les gens	0 1 2			
58.	Se gratte le nez, la peau ou d'autres parties du corps	0 1 2			

83.	Entrepose des choses dont il/elle n'a pas besoin (décrire) _____	0 1 2	107.	Se mouille durant le jour	0 1 2
84.	Comportements bizarres (décrire) _____	0 1 2	108.	Mouille son lit	0 1 2
85.	Idées étranges (décrire) _____	0 1 2	109.	Pleurniche, gémit	0 1 2
86.	Irritable, entêté(e), maussade	0 1 2	110.	Souhaite d'être l'autre sexe	0 1 2
87.	Change soudainement d'humeur	0 1 2	111.	Se retire, n'aime pas s'impliquer avec les autres	0 1 2
88.	Boude beaucoup	0 1 2	112.	S'inquiète	0 1 2
89.	Soupçonneux(se), méfiant(e)	0 1 2	113.	S'il vous plaît, écrire les problèmes que votre enfant a et qui ne sont pas cités plus haut.	
90.	Grossier(e)	0 1 2			0 1 2
91.	Parle de se tuer	0 1 2			0 1 2
92.	Parle ou marche durant sommeil. (décrire) _____	0 1 2			0 1 2
93.	Parle trop	0 1 2			
94.	Agace beaucoup	0 1 2			
95.	Accès de colère, des crises, ou s'emporte facilement	0 1 2			
96.	Pense trop au sexe	0 1 2			
97.	Menace les gens	0 1 2			
98.	Suce son pouce	0 1 2			
99.	Trop préoccupé(e) par l'ordre et la propreté	0 1 2			
100.	Trouble lié au sommeil (décrire) _____	0 1 2			
101.	Fait l'école buissonnière, vagabonde	0 1 2			
102.	N'est pas actif(ve), a des mouvements lents, manque d'énergie.....	0 1 2			
103.	Triste, malheureux(se) ou depressif(ve)	0 1 2			
104.	Extrêmement bruyant(e)	0 1 2			
105.	Boit de l'alcool ou utilise des drogues (décrire) _____	0 1 2			
106.	Vandalisme (tendance à détruire)..	0 1 2			

Factor C

Factor Loadings of Parental Support and Stimulation at Preschool Age

*Factor Loadings of the Variables Included in the Factor of Parental Support and Stimulation at
Preschool Age*

Variables	Factor Loadings
Cognitive stimulation	.68
Quality of the home environment	.76
Positive discipline style	.69

Note. Eigenvalue = 1.52. Pct of Var = 50.6%

Appendix D

Maternal Teaching Observation System:

Operational Definition and Procedural Details of the Maternal Scaffolding Code

Maternal Scaffolding

This code reflects an overall impression of the extent to which the mother stimulates her child intellectually. Does she encourage independent thinking by her child, transferring to him/her a large part of the responsibility for the completion of the task? Does she use the puzzle to attempt to teach new things to her child? This code is used following each one-minute interval of the interaction. A summary score is created by averaging across the different intervals.

Codes:

1. High cognitive stimulation: this code is used when the mother is consistently stimulating her offspring. She forces the child to think about the steps needed in order to complete the puzzle, by asking many questions and (when possible) letting the child take over the responsibility for the completion of the task.
2. Moderate cognitive stimulation: this code serves to describe a mother who attempts to stimulate her child, but does so inconsistently. When she questions her child or attempts to teach him/her something, she usually underestimates the child's current level of ability and knowledge.
3. Low cognitive stimulation: this code is employed when the mother's cognitive demands toward her child are minimal. She does not encourage independent mastery of the task, and neglects to attempt to teach new things to her child.

Appendix E

French Translation of the HOME Inventory

HOME 3-6

Mettez un plus (+) ou un moins (-) dans la colonne à côté de chaque énoncé si le comportement est observé durant la visite ou si le parent mentionne que ces conditions ou événements sont caractéristiques de l'environnement familial.

I. STIMULATION À L'APPRENTISSAGE

1. L'enfant a des jouets pour apprendre les couleurs, les tailles et les formes.	
2. Il/elle a plus de 3 casse-têtes (puzzles).	
3. A accès à un radio-cassette ou CD et possède au moins 5 cassettes ou CD pour enfants.	
4. A des jeux lui permettant l'expression personnelle (pâte à modeler, crayons, peinture).	
5. A des jeux qui demandent une motricité fine.	
6. A des jeux permettant d'apprendre les chiffres.	
7. A au moins 10 livres pour enfants.	
8. On peut voir au moins 10 livres dans le domicile.	
9. Est-ce que vous ou votre conjoint achetez et lisez le journal à tous les jours ?	
10. Êtes-vous abonné à une ou plusieurs revues ?	
11. On encourage l'enfant à apprendre les formes.	
Sous-total	

II. STIMULATION AU LANGAGE

12. Il a des jeux pour apprendre le nom des animaux.	
13. On l'encourage à apprendre l'alphabet	
14. Apprenez-vous à votre enfant à dire S.V.P, merci, désolé ? (politesse verbale)	
15. Le parent utilise une grammaire et une prononciation correctes	
16. Le parent l'encourage à parler et prend le temps de l'écouter.	

17. La voix du parent démontre des sentiments positifs envers l'enfant.	
18. Donnez-vous le choix du menu à votre enfant pour déjeuner ou dîner ?	
Sous-total	

III. ENVIRONNEMENT PHYSIQUE

19. Le bâtiment semble sécuritaire.	
20. L'environnement de jeu extérieur semble sécuritaire.	
21. L'intérieur de l'appartement n'est pas sombre et ne donne pas une impression de monotonie.	
22. Le quartier est plaisant à regarder.	
23. Le domicile offre au moins 100 pi. carrés (environ 9 mètres carrés) d'espace par personne.	
24. Les pièces ne sont pas surchargées de meubles.	
25. Les pièces visibles sont raisonnablement propres et encombrées au minimum.	
Sous-total	

IV. CHALEUR ET ACCEPTATION

26. Est-ce que vous ou votre conjoint prenez votre enfant dans vos bras tous les jours pendant 10-15 minutes ?	
27. Le parent parle avec l'enfant au moins deux fois pendant la visite.	
28. Le parent répond verbalement aux questions et aux requêtes de l'enfant.	
29. Le parent donne habituellement une réponse verbale quand l'enfant lui parle.	

30. Le parent fait l'éloge des qualités de l'enfant, deux fois pendant la visite.	
31. Le parent caresse ou embrasse l'enfant ou le serre dans ses bras pendant la visite.	
32. Le parent aide son enfant à montrer ses accomplissements pendant la visite.	
Sous-total	

V. STIMULATION ACADÉMIQUE

33. On encourage l'enfant à apprendre ses couleurs	
34. On l'encourage à apprendre des chansons, rimes, etc.	
35. On l'encourage à apprendre les relations spatiales.	
36. On l'encourage à apprendre les chiffres.	
37. On l'encourage à apprendre à lire quelques mots.	
Sous-total	

VI . MODELING

38. On s'attend à qu'il soit capable d'attendre avant de manger un met préféré.	
39. On utilise la télé judicieusement.	
40. Le parent a présenté l'interviewer à l'enfant.	
41. Permet à l'enfant de se fâcher sans lui faire de reproches.	
42. L'enfant peut frapper le parent sans qu'il/elle ait droit à une punition sévère.	
Sous-total	

VII. VARIÉTÉ DANS LES EXPÉRIENCES

43. L'enfant possède un instrument de musique, réel ou en jouet	
44. Il/elle fait une sortie avec un membre de la famille aux deux semaines (minimum).	
45. A voyagé à plus de 80 km (50 milles) de la maison, dans les 12 derniers mois.	
46. A fait une sortie au musée dans les 12 derniers mois.	

47. On l'encourage à ramasser ses jouets sans aide.	
48. Le parent utilise un langage et un vocabulaire complexes.	
49. Ses oeuvres d'art sont affichées quelque part dans la maison.	
50. Il/elle mange en même temps que ses 2 parents, au moins une fois par jour.	
51. On lui permet de choisir certains aliments à l'épicerie.	
Sous-total	

VIII. ACCEPTATION

52. Si le parent le chicane ou le dénigre, ce n'est pas plus d'une fois pendant l'entrevue.	
53. Le parent ne retient pas l'enfant physiquement lors de la visite.	
54. Le parent ne le gifle pas et ne lui donne pas de fessée lors de la visite.	
55. L'avez-vous puni physiquement plus d'une fois durant les 7 derniers jours ?	
Sous-total	

Commentaires: _____

Appendix F

French Translation of the Parenting Scale

Rempli par: Mère

Père

No d'identification _____

Être Parent (Arnold, 1993)

À un moment ou à un autre, tous les enfants se comportent « mal », ou font des choses qui pourraient être dangereuses ou qui déplaisent aux parents. Voici quelques exemples :

- | | | |
|----------------------|-----------------------------|--------------------------|
| -frapper quelqu'un | -se lamenter/gémir | -lancer de la nourriture |
| -oublier ses devoirs | -laisser traîner les jouets | -mentir |
| -faire une crise | -refuser d'aller se coucher | -vouloir biscuit avant |
| | souper | |
| -courir dans la rue | -argumenter | -rentrer à la maison |
| | retard | |

Les parents ont différentes façons de se comporter face à ce genre de problèmes. Ci-dessous, vous trouverez des situations qui décrivent certains des styles que peuvent avoir les parents. Pour chaque situation, veuillez faire un crochet dans le cercle qui décrit le mieux la façon dont vous vous y êtes pris(e) avec votre enfant au cours des deux derniers mois.

EXEMPLE: À l'heure des repas...

...je laisse mon enfant décider de la quantité de nourriture qu'il/elle doit manger.	O--O--O--O--O--O--O	...c'est moi qui décide de la quantité de nourriture qu'il/elle doit manger.
--	---------------------	--

Veuillez vous assurer d'avoir répondu à toutes les questions

1. Lorsque mon enfant se comporte mal...

...j'interviens tout de suite.	O--O--O--O--O--O--O	...j'interviens plus tard.
--------------------------------	---------------------	----------------------------

2. Avant d'intervenir à propos d'un problème...

...je donne plusieurs avertissements à mon enfant.	O--O--O--O--O--O--O	...je ne lui donne qu'un seul avertissement.
--	---------------------	--

3. Lorsque je suis contrarié(e) ou tendu(e)...

...je suis irritable et sur le dos de mon enfant.	O--O--O--O--O--O--O	...je ne suis pas plus irritable que d'habitude.
---	---------------------	--

4. Lorsque j'interdis à mon enfant de faire quelque chose...

...je suis très bref(ève).	O--O--O--O--O--O--O	...je parle beaucoup.
----------------------------	---------------------	-----------------------

5. Lorsque mon enfant me harcèle sans arrêt...

...je peux ignorer son comportement.	O--O--O--O--O--O--O	...je incapable d'ignorer son comportement.
--------------------------------------	---------------------	---

6. Lorsque mon enfant se comporte mal...

...habituellement, nous avons une longue discussion.	O--O--O--O--O--O--O	...je ne discute pas.
--	---------------------	-----------------------

7. Lorsque je fais des menaces...

...je suis certain(e) de pouvoir les mettre à exécution.	O--O--O--O--O--O--O	...je sais à l'avance que je ne ferai rien.
--	---------------------	---

8. Je suis le genre de parent qui...

...met des limites à ce que mon enfant peut faire.	O--O--O--O--O--O--O	...laisse mon enfant faire tout ce qu'il/elle veut.
--	---------------------	---

9. Lorsque mon enfant se comporte mal...

...je lui fais un long discours.	O--O--O--O--O--O--O	...je parle brièvement et je vais droit au but.
----------------------------------	---------------------	---

10. Lorsque mon enfant se comporte mal...

...j'élève la voix ou je crie.	O--O--O--O--O--O--O	...je lui parle calmement.
--------------------------------	---------------------	----------------------------

11. Si je dis " non " et que je n'obtiens pas de résultats immédiats...

...je prends une autre approche.	O--O--O--O--O--O--O	...je continue de discuter en essayant de convaincre mon enfant.
----------------------------------	---------------------	--

12. Quand je veux que mon enfant cesse de faire quelque chose...

...je lui dis fermement d'arrêter.	O--O--O--O--O--O--O	...je le cajole ou le supplie d'arrêter.
------------------------------------	---------------------	--

13. Quand mon enfant est hors de vue...

...souvent, je ne sais pas ce qu'il/elle est en train de faire.	O--O--O--O--O--O--O	...j'ai toujours une bonne idée de ce qu'il/elle est en train de faire.
---	---------------------	---

14. Après avoir eu un problème avec mon enfant...

...je lui tiens souvent rancune.	O--O--O--O--O--O--O	...les choses reviennent rapidement à la normale.
----------------------------------	---------------------	---

15. Quand nous ne sommes pas à la maison...

...je m'y prends avec mon enfant comme si j'étais chez nous.	O--O--O--O--O--O--O	...je suis moins strict(e) que d'habitude avec mon enfant.
--	---------------------	--

16. Lorsque mon enfant fait quelque chose qui me déplaît...

...j'interviens chaque fois que cela arrive.	O--O--O--O--O--O--O	...souvent, je ne fais rien.
--	---------------------	------------------------------

17. Lorsqu'il y a un problème avec mon enfant...

...les choses s'accumulent jusqu'à ce que j'explose.	O--O--O--O--O--O--O	...les choses restent sous contrôle.
--	---------------------	--------------------------------------

18. Lorsque mon enfant se comporte mal, je lui donne une fessée ou une gifle, je le secoue ou le frappe...

...jamais ou rarement.	O--O--O--O--O--O--O	...la plupart du temps.
------------------------	---------------------	-------------------------

19. Quand mon enfant ne fait pas ce que je lui demande...

...souvent je l'ignore ou je finis par le faire moi-même.	O--O--O--O--O--O--O	...je m'y prends d'une autre façon.
---	---------------------	-------------------------------------

20. Lorsque je donne un avertissement ou que je fais une menace appropriée...

...cela m'arrive souvent de ne rien faire.	O--O--O--O--O--O--O	...je fais toujours ce que j'ai promis.
--	---------------------	---

21. Si je dis «non» et que je n'obtiens pas de résultats...

...je m'y prends d'une autre façon.	O--O--O--O--O--O--O	...j'offre à mon enfant quelque chose d'agréable pour qu'il/elle obéisse.
-------------------------------------	---------------------	---

22. Lorsque mon enfant se comporte mal...

...je reste calme.	O--O--O--O--O--O--O	...je deviens tellement frustré(e) ou fâché(e) que mon enfant le remarque.
--------------------	---------------------	--

23. Lorsque mon enfant se comporte mal...

...je lui demande pourquoi il/elle a agi ainsi.	O--O--O--O--O--O--O	...je lui dis «non» ou je m'y prends autrement.
---	---------------------	---

24. Si mon enfant se comporte mal et a l'air désolé par la suite...

...je règle le problème comme d'habitude.	O--O--O--O--O--O--O	...je laisse passer cette fois-là.
---	---------------------	------------------------------------

25. Lorsque mon enfant se comporte mal...

...il est rare que j'utilise des gros mots ou des jurons.	O--O--O--O--O--O--O	...j'utilise presque toujours des gros mots.
---	---------------------	--

26. Quand j'interdis à mon enfant de faire quelque chose...

...je le laisse faire de toute façon.	O--O--O--O--O--O--O	...je maintiens ce que j'ai dit.
---------------------------------------	---------------------	----------------------------------

27. Lorsque j'interviens à propos d'un problème...

...je demande des excuses à mon enfant.	<input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/>	...je ne lui demande pas d'excuses.
---	---	-------------------------------------

28. Quand mon enfant fait quelque chose que je n'aime pas, je l'insulte, lui dis des injures ou des choses méchantes...

...jamais ou rarement.	<input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/>	...la plupart du temps.
------------------------	---	-------------------------

29. Si mon enfant réplique ou se plaint lorsque j'interviens à propos d'un problème...

...j'ignore ses lamentations et je maintiens ce que j'ai dit.	<input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/>	...je lui explique qu'il ne doit pas se plaindre.
---	---	---

30. Si mon enfant se fâche quand je dis «non»...

...je fléchis et je le laisse avoir le dernier mot.	<input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/> - <input type="radio"/>	...je maintiens ce que j'ai dit.
---	---	----------------------------------

Appendix G

French Translation of the Parenting Dimensions Inventory

Rempli par: Mère

Père

No d'identification: _____

PDI

(Slater & Power, 1987)

Les énoncés suivants portent sur des sujets d'intérêt et de préoccupation dans l'éducation des enfants pour certains parents. Tous les parents n'ont pas le même point de vue face à ces sujets. Encerclez le chiffre qui s'applique le mieux à votre façon de faire avec votre enfant.

Pas du tout représentatif 1	Très peu représentatif 2	Un peu représentatif 3	Assez représentatif 4	Très représentatif 5	Tout à fait représentatif 6
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1. J'encourage mon enfant à parler de ses problèmes.	1	2	3	4	5	6
2. Je maintiens toujours jusqu'au bout la discipline établie pour mon enfant, peu importe le temps que cela prend.	1	2	3	4	5	6
3. Parfois c'est tellement long entre le moment où mon enfant se conduit mal et le moment où j'ai l'opportunité d'y réagir, que je laisse cela passer.	1	2	3	4	5	6
4. Je ne permets pas à mon enfant de se mettre en colère contre moi.	1	2	3	4	5	6
5. Il y a des fois où je n'ai tout simplement pas l'énergie pour faire en sorte que mon enfant se conduise comme il le devrait.	1	2	3	4	5	6
6. Mon enfant peut souvent me persuader de s'en tirer plus facilement que je n'en avais l'intention.	1	2	3	4	5	6
7. Mon enfant me persuade de changer d'idée après que je lui aie refusé une demande.	1	2	3	4	5	6
8. Je crois que mon enfant devrait être encouragé(e) à faire les choses mieux que les autres enfants.	1	2	3	4	5	6
9. Mon enfant et moi vivons souvent des moments intimes et chaleureux ensemble.	1	2	3	4	5	6
10. J'encourage mon enfant à être curieux(se), à explorer et à questionner les choses.	1	2	3	4	5	6
11. Je trouve cela intéressant et éducatif d'être avec mon enfant pendant de longues périodes.	1	2	3	4	5	6
12. Je ne crois pas que les enfants devraient recevoir de l'information sexuelle.	1	2	3	4	5	6
13. Je crois que les enfants doivent écouter et se taire.	1	2	3	4	5	6
14. Je crois que ce n'est pas toujours une bonne idée d'encourager les enfants à parler de leurs inquiétudes parce que parfois cela les perturbe davantage.	1	2	3	4	5	6

15. J'encourage mon enfant à exprimer ses opinions.	1	2	3	4	5	6
16. Je m'assure que mon enfant sache à quel point j'apprécie ce qu'il essaye d'accomplir.	1	2	3	4	5	6
17. Je laisse savoir à mon enfant à quel point je suis humilié(e) et désappointé(e) lorsqu'il se conduit mal.	1	2	3	4	5	6
18. Je crois qu'un enfant doit être entraîné à la propreté le plus tôt possible.	1	2	3	4	5	6
19. Je crois que la plupart des enfants changent d'idée tellement souvent qu'il est difficile de prendre leurs opinions au sérieux.	1	2	3	4	5	6
20. Je n'ai pas ou très peu de difficulté à m'en tenir aux règles de conduite que j'ai établies pour mon enfant, même lorsque des proches parents (incluant les grand-parents) sont présents.	1	2	3	4	5	6
21. Lorsque je laisse mon enfant parler de ses problèmes, il finit par se plaindre davantage.	1	2	3	4	5	6
22. Je m'attends à ce que mon enfant soit reconnaissant envers ses parents et apprécie tous les avantages qu'il a.	1	2	3	4	5	6
23. Une fois que j'ai décidé comment réagir/intervenir à une mauvaise conduite de mon enfant, je tiens jusqu'au bout.	1	2	3	4	5	6
24. Je respecte les opinions de mon enfant et je l'encourage à les exprimer.	1	2	3	4	5	6
25. Je ne menace jamais mon enfant de le punir à moins d'être certain(e) de pouvoir tenir parole.	1	2	3	4	5	6
26. Lorsqu'une règle familiale a été établie, je crois qu'elle doit être strictement respectée, sans exception.	1	2	3	4	5	6

Voici une liste d'énoncés concernant les attitudes parentales envers l'éducation des enfants. Comparez les deux énoncés et déterminez avec lequel vous êtes le plus en accord. Encerclez le chiffre qui correspond.

Si vous êtes également en accord avec les deux énoncés, encerclez *également en accord avec l'énoncé A et B +.

Fortement plus en accord avec A 1	Modérément plus en accord avec A 2	Légèrement plus en accord avec A 3	Également en accord avec A et B 4	Légèrement plus en accord avec B 5	Modérément plus en accord avec B 6	Fortement plus en accord avec B 7
--------------------------------------	---------------------------------------	---------------------------------------	--------------------------------------	---------------------------------------	---------------------------------------	--------------------------------------

A Les enfants ont besoin de plus de liberté qu'ils n'en ont actuellement pour arriver à se faire leur propre idée sur les choses.	1 2 3 4 5 6 7	B Les enfants ont besoin de plus de direction qu'ils n'en ont actuellement de la part de leurs parents.
A Je me soucie plus que la plupart des parents que je connais de faire en sorte que mes enfants m'obéissent.	1 2 3 4 5 6 7	B Je me soucie moins que la plupart des parents que je connais de faire en sorte que mes enfants m'obéissent.
A J'essaie d'empêcher mes enfants de faire des erreurs en établissant des règles pour leurs propres bien.	1 2 3 4 5 6 7	B J'essaie de donner à mes enfants la liberté de faire des erreurs et d'apprendre de celles-ci.
A Si les enfants ont trop de règles à suivre, ils deviendront des adultes malheureux.	1 2 3 4 5 6 7	B Il est important d'établir et d'imposer des règles aux enfants pour qu'ils deviennent des adultes heureux.

Pour chacun des énonces suivants, encerclez le chiffre qui indique la fréquence à laquelle cet énoncé est vrai pour votre famille.

Jamais	Une fois de temps en temps	Quelquefois	Fréquemment	La plupart du temps	Toujours
1	2	3	4	5	6

1.	Durant la semaine, nous suivons un horaire régulier pour les soupers.	1	2	3	4	5	6
2.	Notre maison est propre et en ordre.	1	2	3	4	5	6
3.	Notre famille est organisée et unie.	1	2	3	4	5	6
4.	Nous arrivons à faire toutes les choses qui ont besoin d'être faites dans la maison.	1	2	3	4	5	6

V. Encerclez le nombre de tâches régulières assignées à vos enfants dans les domaines suivants:

<u>Aucune</u> 0	<u>Une</u> 1	<u>Deux</u> 2	<u>Trois ou +</u> 3
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1.	Les repas (aller à l'épicerie, cuisiner, mettre la table, laver la vaisselle, etc.).	0	1	2	3
2.	Entretien (nettoyer une pièce, faire le lit, sortir les déchets, etc.).	0	1	2	3
3.	Lessive (mettre les vêtements sales au panier, les laver, les repasser, etc.).	0	1	2	3
4.	Travail sur le terrain (tondre le gazon, ramasser les feuilles, balayer les allées, etc.).	0	1	2	3
5.	Prendre soin d'un ou des animaux domestiques (chien, chat..., les nourrir, faire une promenade, nettoyer la litière, etc.).	0	1	2	3
6.	Autre (garder les enfants, arroser les plantes, laver l'auto, ramasser le courrier).	0	1	2	3

- VI. Voici différentes situations qui se produisent fréquemment à l'enfance. Vous pouvez avoir vécu ou non ces expériences avec vos propres enfants.

Imaginez que chacune de ces situations vienne de se produire et indiquez quelles sont les chances que vous réagissiez ainsi.

Très peu probable 0	Peu probable 1	Probable 2	Très probable 3
------------------------	-------------------	---------------	--------------------

- 1) Votre enfant est sorti à l'extérieur sans avoir ramassé ses jouets comme vous l'aviez demandé.

Ignorer la situation.	0	1	2	3
Retirer un privilège (p. ex. pas de dessert, de télé) ou ajouter une corvée (p. ex. ranger les jouets).	0	1	2	3
L'envoyer dans sa chambre ou le mettre en punition sur une chaise.	0	1	2	3
Lui donner une fessée ou le frapper.	0	1	2	3
Parler à l'enfant (discuter des possibilités, expliquer pourquoi vous voulez qu'il fasse ou ne fasse pas telle chose).	0	1	2	3
Le gronder.	0	1	2	3
Lui rappeler la règle de conduite ou lui répéter la directive.	0	1	2	3

- 2) Après s'être disputé pour des jouets, votre enfant frappe un camarade.

Ignorer la situation.	0	1	2	3
Retirer un privilège (p. ex. pas de dessert, de télé) ou ajouter une corvée (p. ex. ranger les jouets).	0	1	2	3
L'envoyer dans sa chambre ou le mettre en punition sur une chaise.	0	1	2	3
Lui donner une fessée ou le frapper.	0	1	2	3
Parler à l'enfant (discuter des possibilités, expliquer pourquoi vous voulez qu'il fasse ou ne fasse pas telle chose).	0	1	2	3
Le gronder.	0	1	2	3
Lui rappeler la règle de conduite ou lui répéter la directive.	0	1	2	3

- 3) Votre enfant devient effronté pendant que vous le disciplinez.

Ignorer la situation.	0	1	2	3
Retirer un privilège (p. ex. pas de dessert, de télé) ou ajouter une corvée (p. ex. ranger les jouets).	0	1	2	3
L'envoyer dans sa chambre ou le mettre en punition sur une chaise.	0	1	2	3
Lui donner une fessée ou le frapper.	0	1	2	3
Parler à l'enfant (discuter des possibilités, expliquer pourquoi vous voulez qu'il fasse ou ne fasse pas telle chose).	0	1	2	3
Le gronder.	0	1	2	3
Lui rappeler la règle de conduite ou lui répéter la directive.	0	1	2	3

4) Vous recevez une note de la part du professeur disant que votre enfant a été dérangeant à l'école.

Ignorer la situation.	0	1	2	3
Retirer un privilège (p. ex. pas de dessert, de télé) ou ajouter une corvée (p. ex. ranger les jouets).	0	1	2	3
L'envoyer dans sa chambre ou le mettre en punition sur une chaise.	0	1	2	3
Lui donner une fessée ou le frapper.	0	1	2	3
Parler à l'enfant (discuter des possibilités, expliquer pourquoi vous voulez qu'il fasse ou ne fasse pas telle chose).	0	1	2	3
Le gronder.	0	1	2	3
Lui rappeler la règle de conduite ou lui répéter la directive.	0	1	2	3

5) Vous surprenez votre enfant à mentir à propos de quelque chose qu'il a fait et que vous désapprouvez.

Ignorer la situation.	0	1	2	3
Retirer un privilège (p. ex. pas de dessert, de télé) ou ajouter une corvée (p. ex. ranger les jouets).	0	1	2	3
L'envoyer dans sa chambre ou le mettre en punition sur une chaise.	0	1	2	3
Lui donner une fessée ou le frapper.	0	1	2	3
Parler à l'enfant (discuter des possibilités, expliquer pourquoi vous voulez qu'il fasse ou ne fasse pas telle chose).	0	1	2	3
Le gronder.	0	1	2	3
Lui rappeler la règle de conduite ou lui répéter la directive.	0	1	2	3

6) Vous apercevez votre enfant en train de jouer dans une rue passante où vous lui avez défendu d'aller pour raisons de sécurité.

Ignorer la situation.	0	1	2	3
Retirer un privilège (p. ex. pas de dessert, de télé) ou ajouter une corvée (p. ex. ranger les jouets).	0	1	2	3
L'envoyer dans sa chambre ou le mettre en punition sur une chaise.	0	1	2	3
Lui donner une fessée ou le frapper.	0	1	2	3
Parler à l'enfant (discuter des possibilités, expliquer pourquoi vous voulez qu'il fasse ou ne fasse pas telle chose).	0	1	2	3
Le gronder.	0	1	2	3
Lui rappeler la règle de conduite ou lui répéter la directive.	0	1	2	3

Appendix H

Factor Loadings of Positive Discipline Style at Preschool Age

Factor Loadings of the Variables Included in the Factor of Positive Discipline Style at Preschool age

Variables	Factor Loadings
Reasoning Factor (PDI)	.75
Reminding Factor (PDI)	.70
Total Positive Parenting (Parenting Scale)	.59

Note. *Eigenvalue* = 1.60. *Pct Var* = 59.1%

Appendix I

Factor Loadings of Maternal Hardship

Factor Loadings of the Variables Included in the Factor of Maternal Hardship

Variables	Factor Loadings
Marital Status ^a	-.54
Parenting Stress	.80
Psychological Symptoms	.77
Social Support Satisfaction	.52

Note. ^a single = 0, Cohabiting or married = 1.
Eigenvalue = 1.80. *Pct Var* = 44.9%

Appendix J

French Translation of the Parenting Stress Inventory

Rempli par: Mère Père

No d'identification: _____

ISP (version abrégée)
(Abidin, 1986)

Directives:

Pour ce questionnaire, nous vous demandons d'encercler la réponse qui décrit le mieux vos sentiments. Il se peut que le choix de réponse ne décrive pas exactement comment vous vous sentez. Dans ce cas, encerclez la réponse qui s'approche le plus de votre sentiment réel. VOTRE PREMIÈRE RÉACTION À CHAQUE QUESTION DEVRAIT ÊTRE VOTRE RÉPONSE.

Veuillez écrire à quel point vous êtes en accord ou en désaccord avec chaque énoncé en encerculant le chiffre qui correspond à la meilleure réponse pour vous selon le choix suivant:

1 = Très d'accord 2 = Parfois d'accord 3 = Modérément d'accord 4 = Parfois en désaccord 5 = Très en désaccord

Exemple: 1 2 3 4 5 : J'aime aller au cinéma (Si vous aimez parfois aller au cinéma, vous devriez alors encercler le "2").

- | | |
|--|-----------------------|
| 1. J'ai souvent le sentiment que je ne peux pas très bien faire face aux choses. | 1 2 3 4 5 |
| 2. Je me trouve à consacrer une plus grande partie de ma vie à combler les besoins de mon enfant que je ne m'y attendais. | 1 2 3 4 5 |
| 3. Je me sens prisonnier(ère) de mes responsabilités de parent. | 1 2 3 4 5 |
| 4. Depuis que j'ai cet enfant, je n'arrive pas à faire des choses nouvelles et différentes. | 1 2 3 4 5 |
| 5. Depuis que j'ai cet enfant, je sens que je ne suis presque jamais capable de faire des choses que j'aime. | 1 2 3 4 5 |
| 6. Je ne suis pas content(e) du dernier article de vêtement que je me suis acheté. | 1 2 3 4 5 |
| 7. Il y a plusieurs choses qui me dérangent au niveau de la vie. | 1 2 3 4 5 |
| 8. Avoir un enfant m'a causé plus de problèmes que je n'avais prévu au niveau de ma relation avec mon époux/épouse (ami/amie). | 1 2 3 4 5 |
| 9. Je me sens seul(e), sans ami(e)s. | 1 2 3 4 5 |

- | | | | | | |
|--|--|---|---|---|---|
| 10. Lorsque je vais à un "party", je ne m'attends généralement pas à avoir du plaisir. | 1 | 2 | 3 | 4 | 5 |
| 11. Je ne suis pas aussi intéressé(e) aux autres personnes que je ne l'étais avant. | 1 | 2 | 3 | 4 | 5 |
| 12. Je n'aime pas les choses que j'aimais auparavant. | 1 | 2 | 3 | 4 | 5 |
| 13. Mon enfant fait rarement des choses pour moi qui me font sentir bien. | 1 | 2 | 3 | 4 | 5 |
| 14. Parfois, je sens que mon enfant ne m'aime pas et qu'il ne veut pas être près de moi. | 1 | 2 | 3 | 4 | 5 |
| 15. Mon enfant me sourit beaucoup moins que je ne m'y attendais. | 1 | 2 | 3 | 4 | 5 |
| 16. Lorsque je fais des choses pour mon enfant, j'ai le sentiment que mes efforts ne sont pas beaucoup appréciés. | 1 | 2 | 3 | 4 | 5 |
| 17. Lorsqu'il joue, mon enfant ne rit pas. | 1 | 2 | 3 | 4 | 5 |
| 18. Mon enfant ne semble pas apprendre aussi vite que la plupart des enfants. | 1 | 2 | 3 | 4 | 5 |
| 19. Mon enfant ne semble pas sourire autant que la plupart des enfants. | 1 | 2 | 3 | 4 | 5 |
| 20. Mon enfant est incapable d'en faire autant que je m'y attendais. | 1 | 2 | 3 | 4 | 5 |
| 21. Il est très difficile pour mon enfant de s'habituer à de nouvelles choses et cela lui prend beaucoup de temps. | 1 | 2 | 3 | 4 | 5 |
| 22. Je sens que: | 1 = je ne suis pas un bon parent
2 = je suis une personne qui a de la difficulté à être parent
3 = je suis un parent qui se situe dans la moyenne
4 = je suis un meilleur parent que la moyenne
5 = je suis un très bon parent | | | | |
| 23. Je m'attendais à avoir plus de sentiments chaleureux envers mon enfant que je n'en ai présentement et cela me dérange. | 1 | 2 | 3 | 4 | 5 |
| 24. Mon enfant fait parfois des choses qui me dérangent juste pour être méchant(e). | 1 | 2 | 3 | 4 | 5 |

25. Mon enfant semble pleurer davantage ou être plus facilement irritable que la majorité des enfants. 1 2 3 4 5

26. Mon enfant se réveille généralement de mauvaise humeur. 1 2 3 4 5

27. J'ai le sentiment que mon enfant a beaucoup de sautes d'humeur. 1 2 3 4 5

28. Mon enfant fait certaines choses qui me dérangent beaucoup. 1 2 3 4 5

29. Mon enfant réagit fortement lorsque quelque chose qu'il n'aime pas se produit. 1 2 3 4 5

30. Mon enfant devient facilement perturbé(e) face à la moindre petite chose. 1 2 3 4 5

31. La routine de sommeil et des repas de mon enfant a été beaucoup plus difficile à établir que je ne m'y attendais. 1 2 3 4 5

32. Je trouve que faire en sorte que mon enfant fasse quelque chose ou arrête de faire quelque chose est:

- 1 = beaucoup plus difficile que je ne m'y attendais
- 2 = un peu plus difficile que je ne m'y attendais
- 3 = à peu près aussi difficile que je ne m'y attendais
- 4 = un peu plus facile que je ne m'y attendais
- 5 = beaucoup plus facile que je ne m'y attendais

33. Pensez attentivement et comptez le nombre de choses que votre enfant fait qui vous dérangent (p.ex.: il(elle) perd du temps, refuse d'écouter, est hyperactif(ve), pleure, interrompt, se bat, se plaint etc.). Encerclez la réponse appropriée.

1 = 1-3 2 = 4-5 3 = 6-7 4 = 8-9 5 = 10 et +

34. Mon enfant fait des choses qui m'agacent beaucoup. 1 2 3 4 5

35. Il s'est avéré(e) que mon enfant est un plus gros problème que ce à quoi je m'attendais. 1 2 3 4 5

36. Mon enfant fait plus de demandes que la plupart des autres enfants. 1 2 3 4 5

Appendix K

French Translation of the Social Support Index

IDNO: _____

S.S.S.-II

Les mères ont divers besoins, comme celui de se confier à une autre personne, de recevoir de l'aide physique ou financière, d'avoir des conseils par rapport aux soins à donner aux enfants ou le besoin de faire des activités avec d'autres, pour n'en nommer que quelques-uns.

1. a) Au cours des 30 derniers jours, à quel point avez-vous eu besoin de parler avec une autre personne de choses personnelles et intimes? Encercler le chiffre qui convient le mieux.

1. Aucun besoin (*Passez à la page suivante*)
2. Légèrement besoin
3. Moyennement besoin
4. Grandement besoin
5. Très grandement besoin

b) Avez-vous eu quelqu'un à qui vous avez pu parler de choses qui étaient personnelles et intimes?
(Encercler OUI ou NON)

NON: *prenez la page suivante.*

OUI: *encercler les numéros correspondant à toutes les personnes qui s'appliquent.
Si une personne entre dans deux catégories (p.ex.: mari et père de l'enfant),
n'encercler qu'une seule des réponses.*

- | | | |
|---------------------------|--|--|
| 1. Mon mari/conjoint | 8. Famille du père de l'enfant | 15. Membre de ma communauté religieuse |
| 2. Père de l'enfant | 9. Autre membre de la parenté | 16. Ami(e) ou voisin(e) |
| 3. Ma mère | 10. Professeur(e); ses assistant(e)s | 17. Médecin de famille |
| 4. Mon père | 11. Infirmière de l'école | 18. Employé(e)s des cliniques |
| 5. Ma grand-mère | 12. Psychothérapeute de l'école | 19. Autre (précisez)
_____ |
| 6. Ma soeur/mon frère | 13. Travailleur(euse) social(e) de l'école | |
| 7. La famille de mon mari | 14. Prêtre ou pasteur | |

c) À quel point avez-vous été satisfaite des conversations que vous avez eues avec d'autres par rapport à vos sentiments personnels et intimes au cours des 30 derniers jours?

1. Très insatisfaite
2. Moyennement insatisfaite
3. Légèrement insatisfaite
4. Légèrement satisfaite
5. Moyennement satisfaite
6. Très satisfaite

2. a) Il est possible que les mères aient besoin de soutien ou de dépannage financier. Au cours des 30 derniers jours, à quel point avez-vous eu besoin que quelqu'un vous prête ou vous donne de l'argent pour vous aider financièrement?

1. Aucun besoin (*Passez à la page suivante*)
2. Légèrement besoin
3. Moyennement besoin
4. Grandement besoin
5. Très grandement besoin

b) Au cours du mois passé, y a-t-il eu quelqu'un de vos connaissances qui vous a prêté ou donné un montant d'argent, 25 \$ par exemple? (*Encerclez OUI ou NON*)

NON: *prenez la page suivante.*

OUI: *encerclez les numéros correspondant à toutes les personnes qui s'appliquent. Si une personne entre dans deux catégories (p.ex.: mari et père de l'enfant), n'encerclez qu'une seule des réponses.*

- | | | |
|---------------------------|--|--|
| 1. Mon mari/conjoint | 8. Famille du père de l'enfant | 15. Membre de ma communauté religieuse |
| 2. Père de l'enfant | 9. Autre membre de la parenté | 16. Ami(e) ou voisin(e) |
| 3. Ma mère | 10. Professeur(e); ses assistant(e)s | 17. Médecin de famille |
| 4. Mon père | 11. Infirmière de l'école | 18. Employé(e)s des cliniques |
| 5. Ma grand-mère | 12. Psychothérapeute de l'école | 19. Autre (précisez)
_____ |
| 6. Ma soeur/mon frère | 13. Travailleur(euse) social(e) de l'école | |
| 7. La famille de mon mari | 14. Prêtre ou pasteur | |

c) Au cours des 30 derniers jours, à quel point avez-vous été satisfaite de la facilité à emprunter ou recevoir de l'argent de ces personnes?

1. Très insatisfaite
2. Moyennement insatisfaite
3. Légèrement insatisfaite
4. Légèrement satisfaite
5. Moyennement satisfaite
6. Très satisfaite

3. a) Les mères ont parfois besoin de conseils ou d'information au sujet des soins à donner aux enfants. Au cours des 30 derniers jours, à quel point avez-vous eu besoin de conseils ou d'information au sujet des soins à donner à votre enfant (vos enfants)?

1. Aucun besoin (*Passez à la page suivante*)
2. Légèrement besoin
3. Moyennement besoin
4. Grandement besoin
5. Très grandement besoin

b) Au cours du mois passé, y a-t-il eu quelqu'un qui a pu vous donner des conseils ou de l'information par rapport aux soins à donner aux enfants? (*Encerclez OUI ou NON*)

NON: *prenez la page suivante.*

OUI: *encerclez les numéros correspondant à toutes les personnes qui s'appliquent. Si une personne entre dans deux catégories (p.ex.: mari et père de l'enfant), n'encerclez qu'une seule des réponses.*

- | | | |
|---------------------------|--|--|
| 1. Mon mari/conjoint | 8. Famille du père de l'enfant | 15. Membre de ma communauté religieuse |
| 2. Père de l'enfant | 9. Autre membre de la parenté | 16. Ami(e) ou voisin(e) |
| 3. Ma mère | 10. Professeur(e); ses assistant(e)s | 17. Médecin de famille |
| 4. Mon père | 11. Infirmière de l'école | 18. Employé(e)s des cliniques |
| 5. Ma grand-mère | 12. Psychothérapeute de l'école | 19. Autre (précisez)
_____ |
| 6. Ma soeur/mon frère | 13. Travailleur(euse) social(e) de l'école | |
| 7. La famille de mon mari | 14. Prêtre ou pasteur | |

c) Au cours des 30 derniers jours, à quel point avez-vous été satisfaite de la qualité des conseils que vous avez reçus par rapport aux soins à donner aux enfants?

1. Très insatisfaite
2. Moyennement insatisfaite
3. Légèrement insatisfaite
4. Légèrement satisfaite
5. Moyennement satisfaite
6. Très satisfaite

4. a) Les gens ont parfois besoin qu'on leur dise qu'on aime leurs idées ou les choses qu'ils font. Au cours des 30 derniers jours, à quel point avez-vous eu besoin que l'on vous dise que l'on aimait vos idées ou les choses que vous faisiez?

1. Aucun besoin (*Passer à la page suivante*)
2. Légèrement besoin
3. Moyennement besoin
4. Grandement besoin
5. Très grandement besoin

b) Au cours du mois passé, y a-t-il eu quelqu'un qui vous a dit qu'il/elle aimait vos idées ou les choses que vous faisiez? (*Encerclez OUI ou NON*)

NON: *passer à la page suivante.*

OUI: *encerclez les numéros correspondant à toutes les personnes qui s'appliquent.*

Si une personne entre dans deux catégories (p.ex.: mari et père de l'enfant), n'encerclez qu'une seule des réponses.

- | | | |
|---------------------------|--|--|
| 1. Mon mari/conjoint | 8. Famille du père de l'enfant | 15. Membre de ma communauté religieuse |
| 2. Père de l'enfant | 9. Autre membre de la parenté | 16. Ami(e) ou voisin(e) |
| 3. Ma mère | 10. Professeur(e); ses assistant(e)s | 17. Médecin de famille |
| 4. Mon père | 11. Infirmière de l'école | 18. Employé(e)s des cliniques |
| 5. Ma grand-mère | 12. Psychothérapeute de l'école | 19. Autre (précisez)
_____ |
| 6. Ma soeur/mon frère | 13. Travailleur(euse) social(e) de l'école | |
| 7. La famille de mon mari | 14. Prêtre ou pasteur | |

c) Au cours des 30 derniers jours, à quel point avez-vous été satisfaite les fois ou quelqu'un vous a dit qu'il/elle aimait vos idées ou les choses que vous faisiez?

1. Très insatisfaite
2. Moyennement insatisfaite
3. Légèrement insatisfaite
4. Légèrement satisfaite
5. Moyennement satisfaite
6. Très satisfaite
- 7.

5. a) Parfois les mères ont besoin de faire appel à quelqu'un pour s'occuper de leurs enfants (par. ex. pour faire une sortie, en cas de maladie ou de travail, etc.). Au cours des 30 derniers jours, à quel point avez-vous eu besoin qu'on vous aide à vous occuper de votre enfant (vos enfants)?

1. Aucun besoin (*Passez à la page suivante*)
2. Légèrement besoin
3. Moyennement besoin
4. Grandement besoin
5. Très grandement besoin

b) Au cours du mois passé, y a-t-il eu quelqu'un qui vous a aidé à vous occuper des enfants? (*Encerclez OUI ou NON*)

NON: *prenez la page suivante.*

OUI: *encerclez les numéros correspondant à toutes les personnes qui s'appliquent. Si une personne entre dans deux catégories (p.ex.: mari et père de l'enfant), n'encerclez qu'une seule des réponses.*

- | | | |
|---------------------------|--|--|
| 1. Mon mari/conjoint | 8. Famille du père de l'enfant | 15. Membre de ma communauté religieuse |
| 2. Père de l'enfant | 9. Autre membre de la parenté | 16. Ami(e) ou voisin(e) |
| 3. Ma mère | 10. Professeur(e); ses assistant(e)s | 17. Médecin de famille |
| 4. Mon père | 11. Infirmière de l'école | 18. Employé(e)s des cliniques |
| 5. Ma grand-mère | 12. Psychothérapeute de l'école | 19. Autre (précisez)
_____ |
| 6. Ma soeur/mon frère | 13. Travailleur(euse) social(e) de l'école | |
| 7. La famille de mon mari | 14. Prêtre ou pasteur | |

c) Au cours des 30 derniers jours, à quel point avez-vous été satisfaite de l'aide que vous avez reçue par rapport aux enfants?

1. Très insatisfaite
2. Moyennement insatisfaite
3. Légèrement insatisfaite
4. Légèrement satisfaite
5. Moyennement satisfaite
6. Très satisfaite

6. a) Les mères ont parfois besoin d'aide pour les tâches domestiques comme le lavage, l'épicerie, le nettoyage, les divers travaux ménagers, ou le transport à des endroits où elles ont besoin d'aller. Au cours des 30 derniers jours, à quel point avez-vous eu besoin que quelqu'un vous aide dans les tâches domestiques?

1. Aucun besoin (*Passez à la page suivante*)
2. Légèrement besoin
3. Moyennement besoin
4. Grandement besoin
5. Très grandement besoin

b) Au cours du mois passé, y a-t-il eu quelqu'un qui vous a aidé dans les tâches domestiques? (*Encerclez OUI ou NON*)

NON: *prenez la page suivante.*

OUI: *encerclez les numéros correspondant à toutes les personnes qui s'appliquent. Si une personne entre dans deux catégories (p.ex.: mari et père de l'enfant), n'encerclez qu'une seule des réponses.*

- | | | |
|---------------------------|--|--|
| 1. Mon mari/conjoint | 8. Famille du père de l'enfant | 15. Membre de ma communauté religieuse |
| 2. Père de l'enfant | 9. Autre membre de la parenté | 16. Ami(e) ou voisin(e) |
| 3. Ma mère | 10. Professeur(e); ses assistant(e)s | 17. Médecin de famille |
| 4. Mon père | 11. Infirmière de l'école | 18. Employé(e)s des cliniques |
| 5. Ma grand-mère | 12. Psychothérapeute de l'école | 19. Autre (précisez)
_____ |
| 6. Ma soeur/mon frère | 13. Travailleur(euse) social(e) de l'école | |
| 7. La famille de mon mari | 14. Prêtre ou pasteur | |

c) Au cours des 30 derniers jours, à quel point avez-vous été satisfaite de l'aide que vous avez reçue par rapport aux tâches domestiques?

1. Très insatisfaite
2. Moyennement insatisfaite
3. Légèrement insatisfaite
4. Légèrement satisfaite
5. Moyennement satisfaite
6. Très satisfaite

7. a) Les mères ont parfois besoin de rencontrer des gens pour avoir du plaisir et relaxer. Au cours des 30 derniers jours, à quel point avez-vous eu besoin de rencontrer d'autres personnes pour avoir du plaisir et relaxer?

1. Aucun besoin (*Passez à la page suivante*)
2. Légèrement besoin
3. Moyennement besoin
4. Grandement besoin
5. Très grandement besoin

b) Au cours du mois passé, y a-t-il eu quelqu'un que vous avez pu rencontrer pour avoir du plaisir et relaxer? (*Encerclez OUI ou NON*)

NON: *passez à la page suivante.*

OUI: *encerclez les numéros correspondant à toutes les personnes qui s'appliquent. Si une personne entre dans deux catégories (p.ex.: mari et père de l'enfant), n'encerclez qu'une seule des réponses.*

- | | | |
|---------------------------|--|--|
| 1. Mon mari/conjoint | 8. Famille du père de l'enfant | 15. Membre de ma communauté religieuse |
| 2. Père de l'enfant | 9. Autre membre de la parenté | 16. Ami(e) ou voisin(e) |
| 3. Ma mère | 10. Professeur(e); ses assistant(e)s | 17. Médecin de famille |
| 4. Mon père | 11. Infirmière de l'école | 18. Employé(e)s des cliniques |
| 5. Ma grand-mère | 12. Psychothérapeute de l'école | 19. Autre (précisez)
_____ |
| 6. Ma soeur/mon frère | 13. Travailleur(euse) social(e) de l'école | |
| 7. La famille de mon mari | 14. Prêtre ou pasteur | |

c) Au cours des 30 derniers jours, à quel point avez-vous été satisfaite du temps que vous avez passé avec ces personnes?

1. Très insatisfaite
2. Moyennement insatisfaite
3. Légèrement insatisfaite
4. Légèrement satisfaite
5. Moyennement satisfaite
6. Très satisfaite

8. a) Les mères ont parfois besoin d'aide ou de conseils par rapport à l'éducation des enfants. Au cours des 30 derniers jours, à quel point avez-vous eu besoin d'aide ou de conseils par rapport à l'éducation de votre enfant (vos enfants)?

1. Aucun besoin (*Passez à la page suivante*)
2. Légèrement besoin
3. Moyennement besoin
4. Grandement besoin
5. Très grandement besoin

b) Au cours du mois passé, y a-t-il eu quelqu'un que vous avez pu rencontrer pour vous aider ou vous donner des conseils par rapport à l'éducation des enfants? (*Encerclez OUI ou NON*)

NON: *prenez la page suivante.*

OUI: *encerclez les numéros correspondant à toutes les personnes qui s'appliquent. Si une personne entre dans deux catégories (p.ex.: mari et père de l'enfant), n'encerclez qu'une seule des réponses.*

- | | | |
|---------------------------|--|--|
| 1. Mon mari/conjoint | 8. Famille du père de l'enfant | 15. Membre de ma communauté religieuse |
| 2. Père de l'enfant | 9. Autre membre de la parenté | 16. Ami(e) ou voisin(e) |
| 3. Ma mère | 10. Professeur(e); ses assistant(e)s | 17. Médecin de famille |
| 4. Mon père | 11. Infirmière de l'école | 18. Employé(e)s des cliniques |
| 5. Ma grand-mère | 12. Psychothérapeute de l'école | 19. Autre (précisez)
_____ |
| 6. Ma soeur/mon frère | 13. Travailleur(euse) social(e) de l'école | |
| 7. La famille de mon mari | 14. Prêtre ou pasteur | |

c) Au cours des 30 derniers jours, à quel point avez-vous été satisfaite de l'aide ou des conseils reçus par rapport à l'éducation de votre enfant (vos enfants)?

1. Très **insatisfaite**
2. Moyennement **insatisfaite**
3. Légèrement **insatisfaite**
4. Légèrement **satisfaite**
5. Moyennement **satisfaite**
6. Très **satisfaite**

9. Tout le monde peut avoir des désaccords avec d'autres. Parmi les personnes suivantes, quelles sont celles avec qui vous pourriez avoir des désaccords déplaisants ou encore qui pourraient vous fâcher ou vous contrarier?

Encerclez les numéros correspondant à toutes les personnes qui s'appliquent.

Si une personne concorde avec deux catégories: ex. mari et père de l'enfant, n'encerclez qu'une des réponses.

- | | | |
|---------------------------|--|--|
| 1. Mon mari/conjoint | 8. Famille du père de l'enfant | 15. Membre de ma communauté religieuse |
| 2. Père de l'enfant | 9. Autre membre de la parenté | 16. Ami(e) ou voisin(e) |
| 3. Ma mère | 10. Professeur(e); ses assistant(e)s | 17. Médecin de famille |
| 4. Mon père | 11. Infirmière de l'école | 18. Employé(e)s des cliniques |
| 5. Ma grand-mère | 12. Psychothérapeute de l'école | 19. Autre (précisez) _____ |
| 6. Ma soeur/mon frère | 13. Travailleur(euse) social(e) de l'école | |
| 7. La famille de mon mari | 14. Prêtre ou pasteur | |

10. À quelle fréquence participez-vous, en moyenne, à des rencontres sociales (par ex. organismes religieux, comités de parents, comités de quartier, organisme de bénévolat, organisme politique, etc.)? Encerclez la réponse qui s'y rapproche le plus.

1. Une fois par semaine, en moyenne.
2. 2 - 3 fois par mois, en moyenne.
3. Une fois par mois, en moyenne.
4. 3 - 4 fois par année, en moyenne.
5. Moins d'une fois par année, en moyenne.

À quoi participez-vous? _____

11. Pouvez-vous nommer d'autres domaines dans lesquels les personnes vous entourant peuvent vous procurer de l'aide; identifiez qui vous fournit cette aide, et indiquez à quel point vous êtes satisfaite de l'aide reçue?

Appendix L

French Translation of the SCL-90

SCL-90

Voici une liste de problèmes et de plaintes que les gens formulent de temps à autre. Nous te demandons de lire chacune de ces plaintes attentivement et de nous indiquer, par le numéro approprié, la réponse qui décrit le mieux À QUEL POINT CE PROBLÈME T'A DÉRANGÉ OU AFFLIGÉ AU COURS DES SEPT (7) DERNIERS JOURS, AUJOURD'HUI INCLUS.

0 Pas du tout	1 Un peu	2 Modérément	3 Passablement	4 Énormément
---------------	----------	--------------	----------------	--------------

EXEMPLE: À QUEL POINT AS-TU ÉTÉ DÉRANGÉ(E) PAR ...

des maux de dos 0 1 2 3 4

AU COURS DES 7 DERNIERS JOURS, À QUEL POINT AS-TU ÉTÉ DÉRANGÉ(E) PAR .

- | | | | | | | |
|-----|---|---|---|---|---|---|
| 1. | des maux de tête? | 0 | 1 | 2 | 3 | 4 |
| 2. | de la nervosité ou des tremblements internes? | 0 | 1 | 2 | 3 | 4 |
| 3. | des pensées désagréables qui revenaient sans cesse? | 0 | 1 | 2 | 3 | 4 |
| 4. | des évanouissements ou des étourdissements? | 0 | 1 | 2 | 3 | 4 |
| 5. | une perte de l'intérêt ou du plaisir sexuel? | 0 | 1 | 2 | 3 | 4 |
| 6. | le fait d'être porté(e) à critiquer les autres? | 0 | 1 | 2 | 3 | 4 |
| 7. | l'idée que quelqu'un d'autre contrôle tes pensées? | 0 | 1 | 2 | 3 | 4 |
| 8. | le sentiment que les autres sont surtout à blâmer pour tes problèmes? | 0 | 1 | 2 | 3 | 4 |
| 9. | des difficultés à te rappeler quelque chose? | 0 | 1 | 2 | 3 | 4 |
| 10. | des inquiétudes à propos de la malpropreté ou de la négligence? | 0 | 1 | 2 | 3 | 4 |
| 11. | le fait d'être facilement agacé(e) ou irrité(e)? | 0 | 1 | 2 | 3 | 4 |
| 12. | des douleurs au coeur ou à la poitrine? | 0 | 1 | 2 | 3 | 4 |
| 13. | la peur des espaces ouverts ou d'être sur la rue? | 0 | 1 | 2 | 3 | 4 |
| 14. | la sentiment de manquer d'énergie ou d'être au ralenti? | 0 | 1 | 2 | 3 | 4 |
| 15. | des pensées d'en finir avec la vie? | 0 | 1 | 2 | 3 | 4 |
| 16. | le fait d'entendre des voix que les autres n'entendent pas? | 0 | 1 | 2 | 3 | 4 |
| 17. | des tremblements? | 0 | 1 | 2 | 3 | 4 |
| 18. | le sentiment que tu ne peux pas te fier à la plupart des gens? | 0 | 1 | 2 | 3 | 4 |
| 19. | le manque d'appétit? | 0 | 1 | 2 | 3 | 4 |
| 20. | le fait de pleurer facilement? | 0 | 1 | 2 | 3 | 4 |
| 21. | le fait d'être gêné(e) ou mal à l'aise avec des personnes du sexe opposé? | 0 | 1 | 2 | 3 | 4 |
| 22. | le sentiment d'être pris(e) au piège ou immobilisé(e)? | 0 | 1 | 2 | 3 | 4 |

23.	des peurs soudaines sans raison?	0	1	2	3	4
24.	des accès de colère que tu ne pouvais pas contrôler?	0	1	2	3	4
25.	la peur de sortir seul(e) de la maison?	0	1	2	3	4
26.	le fait de te blâmer toi-même pour des choses?	0	1	2	3	4
27.	des douleurs dans le bas du dos?	0	1	2	3	4
28.	le sentiment de ne plus avancer dans ce que tu fais?	0	1	2	3	4
29.	le sentiment d'être seul(e)?	0	1	2	3	4
30.	le fait d'avoir le cafard, de te sentir triste?	0	1	2	3	4
31.	le fait de trop t'inquiéter à propos de petits rien, de détails?	0	1	2	3	4
32.	un manque total d'intérêt dans tout?	0	1	2	3	4
33.	des sentiments de crainte, de peur?	0	1	2	3	4
34.	le fait que tes sentiments sont trop facilement blessés?	0	1	2	3	4
35.	le fait que les autres sont au courant de tes pensées intimes?	0	1	2	3	4
36.	le sentiment que les autres ne te comprennent pas ou sont antipathiques?	0	1	2	3	4
37.	le sentiment que les gens ne sont pas amicaux ou ne t'aiment pas?	0	1	2	3	4
38.	le fait d'avoir à faire les choses très lentement pour t'assurer que tout est correct?	0	1	2	3	4
39.	des palpitations ou des battements rapides du coeur?	0	1	2	3	4
40.	des nausées ou l'estomac dérangé?	0	1	2	3	4
41.	le fait de te sentir inférieur(e) aux autres?	0	1	2	3	4
42.	des muscles endoloris?	0	1	2	3	4
43.	le sentiment que tu es surveillé(e) ou que les autres parlent de toi?	0	1	2	3	4
44.	de la difficulté à t'endormir?	0	1	2	3	4
45.	le fait d'avoir à vérifier et re-vérifier ce que tu fais?	0	1	2	3	4
46.	de la difficulté à prendre des décisions?	0	1	2	3	4
47.	la peur de voyager par autobus, par métro ou par train?	0	1	2	3	4
48.	de la difficulté à reprendre ton souffle?	0	1	2	3	4
49.	des bouffées de froid ou de chaleur?	0	1	2	3	4
50.	le fait d'avoir à éviter certaines choses, certains endroits ou certaines activités parce que tu as peur?	0	1	2	3	4
51.	le fait de te sentir la tête vide?	0	1	2	3	4
52.	des engourdissements ou des démangeaisons dans différentes parties de ton corps?	0	1	2	3	4
53.	des serremments de gorge, l'impression d'avoir une boule dans la gorge?	0	1	2	3	4
54.	un sentiment de désespoir face à l'avenir?	0	1	2	3	4
55.	de la difficulté à te concentrer?	0	1	2	3	4
56.	le fait de sentir que certaines parties de ton corps sont faibles?	0	1	2	3	4
57.	le fait de te sentir tendu(e) ou à bout de nerfs?	0	1	2	3	4
58.	des sentiments de lourdeur dans les bras ou dans les jambes?	0	1	2	3	4
59.	le fait de penser à la mort ou à mourir?	0	1	2	3	4

60.	le fait de trop manger?	0	1	2	3	4
61.	le fait de te sentir mal à l'aise quand les gens te regardent ou parlent de toi?	0	1	2	3	4
62.	le fait d'avoir des pensées qui ne sont pas les tiennes?	0	1	2	3	4
63.	des envies de battre quelqu'un, de le/la blesser ou de lui faire mal?	0	1	2	3	4
64.	le fait de te réveiller aux petites heures du matin?	0	1	2	3	4
65.	le sentiment de devoir répéter toujours les mêmes gestes comme toucher, compter, te laver?	0	1	2	3	4
66.	le fait de passer des nuits blanches ou d'avoir le sommeil troublé?	0	1	2	3	4
67.	des envies de briser ou de casser des choses?	0	1	2	3	4
68.	l'idée que personne ne veut partager?	0	1	2	3	4
69.	le fait de te sentir très intimidé(e) par les autres?	0	1	2	3	4
70.	le fait de te sentir mal à l'aise dans les foules, comme au cinéma ou dans les magasins?	0	1	2	3	4
71.	le sentiment que tout te demande un effort?	0	1	2	3	4
72.	des crises de frayeur ou de panique?	0	1	2	3	4
73.	le fait de te sentir mal à l'aise de manger ou de boire en public?	0	1	2	3	4
74.	des disputes fréquentes?	0	1	2	3	4
75.	un sentiment de nervosité lorsque tu es seul(e)?	0	1	2	3	4
76.	le fait que les autres ne te donnent pas le crédit souhaité pour tes accomplissements?	0	1	2	3	4
77.	le sentiment d'être seul(e) même lorsque tu es avec d'autres?	0	1	2	3	4
78.	le fait de te sentir si agité(e) que tu ne peux pas rester assis(e) tranquille?	0	1	2	3	4
79.	le sentiment de n'être bon(ne) à rien?	0	1	2	3	4
80.	le sentiment que quelque chose de mauvais va t'arriver?	0	1	2	3	4
81.	le fait de crier, ou de lancer des objets?	0	1	2	3	4
82.	la peur de t'évanouir en public?	0	1	2	3	4
83.	le sentiment que les gens prendront avantage de toi si tu les laisse faire?	0	1	2	3	4
84.	des pensées à propos du sexe qui te dérangent beaucoup?	0	1	2	3	4
85.	l'idée que tu devrais être puni(e) pour tes péchés?	0	1	2	3	4
86.	des pensées et des impressions de nature effrayante?	0	1	2	3	4
87.	l'idée que quelque chose de sérieux ne va pas avec ton corps?	0	1	2	3	4
88.	le fait de ne jamais te sentir proche d'une autre personne?	0	1	2	3	4
89.	des sentiments de culpabilité?	0	1	2	3	4
90.	l'idée que quelque chose ne va pas avec ton esprit?	0	1	2	3	4

Appendix M

Demographic Information Questionnaire (DIQ)

N° d'identification _____

Date: _____

L'INDIVIDU DANS SON MILIEU

Renseignements sociodémographiques

Tous ces renseignements sont traités de façon totalement confidentielle

1. Sexe ☐ M ☐ F

2. Âge _____ ans Date de naissance _____ AN MO JR

3. État civil

***Note*:** "Conjoints de fait": désigne deux personnes qui vivent ensemble comme si elles étaient mariées. Il s'agit de ton état actuel; même si tu es légalement divorcé(e) ou autre, mais que tu vis avec un(e) conjoint(e) présentement, inscris conjoint de fait.

☐ Célibataire

☐ Conjoint de fait

☐ Marié(e)

☐ Séparé(e)

☐ Divorcé(e)

☐ Veuf/veuve

Depuis quelle date?

AN MO JR

4. Nombre d'enfants _____

Si enceinte (ou conjointe enceinte), bébé attendu pour:

AN MO

Pour chaque enfant:

1 - Inscrire le nom, le sexe, la date de naissance

2 - Encercler "TE" si c'est ton enfant (tu es le parent biologique)

"EC" si l'enfant du conjoint (le conjoint actuel est le parent biologique)

"EA" si c'est un enfant adopté / "FA" en foyer d'accueil et qui vit chez toi

Si "TE" et "EC" sont vrais, encercler les deux.

3 - Indiquer si l'enfant vit avec toi, OUI ou NON ou GP (garde partagée)

4 - Inscrire l'année scolaire (si applicable) ainsi que si l'enfant fréquente une classe ou une école spéciale.

(Si tu as plus de quatre enfants, pourrais-tu inscrire leurs informations sur une feuille séparée.)

6. **As-tu un emploi** (rappel: renseignements gardés confidentiels)?

OUI ☐

NON ☐

Occupation: _____

As-tu déjà eu un emploi?

Oui ☐ Non ☐

Tes tâches: _____

En quoi? _____

Combien d'heures/sem.? _____

Pendant combien de temps?

____ an(s) ____ mois

Salaire de l'heure _____ \$

Quand as-tu arrêté de

travailler:

Depuis quand es-tu à cet emploi? inscrire la date

date: ____/____/____

AN MO

AN MO

____/____/____

Au cours des 12 derniers mois, as-tu bénéficié de:

Oui ☐ Non ☐ l'Assurance chômage?

Oui ☐ Non ☐ Prestations d'aide sociale?

Oui ☐ Non ☐ la CSST? (préciser: _____)

7. **Informations sur le conjoint** (renseignements gardés confidentiels):

AN MO JR

a) Son nom: _____ naissance _____

Son occupation: _____

Ses tâches: _____

Son salaire: _____ \$/ heure

Nombre d'heures _____ / semaine

AN MO

Il/Elle travaille là depuis: date ____ ____

b) Au cours des 12 derniers mois, a-t-il/elle bénéficié de:

Oui ☐ Non ☐ l'Assurance chômage?

Oui ☐ Non ☐ Prestations d'aide sociale?

Oui ☐ Non ☐ la CSST? (préciser: _____)

c) Sa scolarité complétée (dernière année terminée):

En quoi? (spécialisation/général): _____

Étudie-t-il (elle) présentement? OUI : Temps plein ☐ partiel ☐ NON ☐

Si oui, diplôme postulé? _____ pour quand? (date) ____/____/____

8. Informations sur le père (si n'habite pas avec la mère)

AN MO JR

a) Son nom: _____ naissance ____ ____ ____

Son occupation: _____

Ses tâches: _____

Son salaire: _____ \$/ heure Nombre d'heures ____ / semaine

AN MO

Il/Elle travaille là depuis: date ____ ____

b) Au cours des 12 derniers mois, a-t-il/elle bénéficié de:

Oui ☐ Non ☐ l'Assurance chômage?

Oui ☐ Non ☐ Prestations d'aide sociale?

Oui ☐ Non ☐ la CSST? (préciser: _____)

c) Sa scolarité complétée (dernière année terminée):

En quoi? (spécialisation/général): _____

Étudie-t-il (elle) présentement? OUI : Temps plein ☐ partiel ☐ NON ☐

Si oui, diplôme postulé? _____ pour quand? (date) ____/____/____

9. Disponibilité pour le test parent-enfant

☐ Le matin

☐ L'après-midi

☐ La semaine

☐ La fin de semaine

10. Vision des couleurs: Il y a une section de la recherche qui porte sur les couleurs. Est-ce que tu as de la difficulté à percevoir certaines couleurs?

☐ Oui (préciser: _____) ☐ Non

S.V.P. Vérifier l'adresse et les numéros de téléphone.

No _____	Rue _____	app. _____
Ville _____		Code postal _____
Téléphones[]:	Personnel: () _____	- _____
	Travail: () _____	- _____
	Parents: () _____	- _____
Autre _____:	() _____	- _____

Ton numéro de téléphone personnel est à quel nom dans l'annuaire téléphonique: Nom complet et lien avec toi:

Adresse des parents: _____

Appendix N

Bilan Qualitatif de l'Apprentissage de la Lecture

A. DESCRIPTION GÉNÉRALE

Le BQAL est divisé en dix étapes comprenant chacune dix épreuves; ces étapes correspondent à la progression déterminée par les méthodes usuelles d'apprentissage de la lecture (synthétiques et mixtes), c'est-à-dire que l'évaluation porte d'abord sur l'acquisition des lettres, des syllabes, des mots, des phrases et des textes.

Les épreuves des cinq premières étapes sont précédées d'une image repère pour que les jeunes élèves puissent trouver sans difficulté les éléments parmi lesquels ils doivent choisir pour donner la bonne réponse.

B. LES ÉTAPES

Les dix étapes sont graduées d'abord selon le nombre d'éléments composant les épreuves (lettre, syllabe, mot et texte) et, deuxièmement, selon la nature de l'association des lettres formant les épreuves (syllabe simple, composée, complexe).

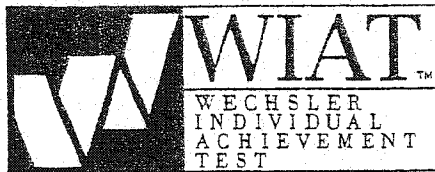
Les questions à choix multiples présentent au sujet trois possibilités de réponses. Dans tous les cas, les deux réponses erronées présentent une graphie et (ou) une prononciation semblables à celles de la réponse juste. Ces choix de réponses rappellent les principales catégories d'erreurs typiques généralement commises par le lecteur débutant : confusions auditives et visuelles, inversions statiques et kinétiques, substitutions.

1. *Première étape : Mesure de l'acquisition de lettres individuelles*, c'est-à-dire les consonnes et les voyelles; seules les lettres présentant une difficulté particulière ou susceptibles d'être confondues avec d'autres de formes sonore ou visuelle semblable sont présentées dans cette étape.
2. *Deuxième étape : Vérification de l'apprentissage des syllabes simples formées par l'association d'une consonne et d'une voyelle* (fi, mo); ces exercices correspondent à ce que Dubosson (1957) a décrit comme la capacité de « syllabisation ». Les syllabes simples ou directes sont caractérisées par les positions relatives de la voyelle et de la consonne, cette dernière précédant toujours la voyelle.
3. *Troisième étape : Évaluation de la capacité d'identification de mots composés exclusivement de syllabes simples*; ces mots peuvent être de deux ou trois syllabes (pipe, cabane).
4. *Quatrième étape : Mesure de l'acquisition des syllabes composées de deux consonnes successives suivies d'une voyelle* (cru, cio) et de *syllabes inverses* où, contrairement aux syllabes simples, la voyelle précède la consonne (eb, ar); ces deux types de syllabes sont présentés individuellement (syllabes sans sens) ou à l'intérieur de mots à deux ou trois syllabes.
5. *Cinquième étape : Évaluation de l'apprentissage des syllabes composées caractérisées par l'association de deux lettres* (voyelle et consonne ou voyelle et voyelle) formant un seul son ou phonème (on, eu).

6. *Sixième étape* : Au cours de cette étape, on présente des *mots bisyllabiques* dont une syllabe seulement est composée, l'autre étant une syllabe simple (sapin, faute).
7. *Septième étape* : Au cours de cette étape on *ajoute une difficulté* en présentant des mots formés de deux syllabes composées (mouli, tambour). Une réponse, même erronée, peut donner des informations à l'examineur, en ce sens que chaque choix comporte au moins un élément de la bonne réponse : chaque épreuve présentant trois mots de deux syllabes, chaque mot est composé d'une bonne syllab (la première ou la seconde) et le professeur peut ainsi noter le son que l'élève n'a pas acquis et qui a donné lieu à une mauvaise réponse; ces informations devront toutefois être confirmées par d'autres épreuves car il est possible que l'enfant ait répondu au hasard et qu'il ne maîtrise donc aucun son présenté.
8. *Huitième étape* : *Evaluation de l'apprentissage des syllabes complexes*. Alors que les syllabes composées étaient formées de l'association de deux voyelles ou d'une voyelle et d'une consonne, les syllabes complexes sont celles qui réunissent deux consonnes (ph, th, ch, gn) ou trois ou quatre lettres produisant un seul son (ouin, ail, eil, ouil, euil).
9. *Neuvième étape* : Au cours de cette étape on *introduit les syllabes complexes dans des mots de deux syllabes et plus*; ces mots peuvent également comprendre des syllabes simples, composées, inverses, ou formées de deux consonnes successives.
10. *Dixième étape* : *Mesure de la compréhension de phrases à une ou plusieurs propositions et de courts textes*. Une limite de temps est imposée pour la lecture de ces textes, car la rapidité de compréhension fait aussi partie de cette épreuve. Le temps réservé à la lecture de chacun des textes a été fixé à partir des résultats d'une préexpérimentation sur un échantillon de 85 sujets, soit 29 de première année, 31 de deuxième année et 25 de troisième année. La préexpérimentation se déroulait dans chaque groupe séparément. Les élèves devaient lire les textes individuellement, et le temps pris pour cette lecture était enregistré (en secondes) par le professeur. Le temps alloué pour cette épreuve correspond au temps maximal enregistré pour les élèves se situant dans le troisième quart de chaque groupe pour chaque texte. Une épreuve est réservée à l'identification de l'écriture cursive.

Appendix O

Numerical Operations Subtest of the
Wechsler Individual Achievement Test



Child's Name _____

Date _____

Examiner _____

Response Booklet

Numerical Operations

①

②

③

④

⑤

$$\begin{array}{r} 3 \\ + 3 \\ \hline \end{array}$$

⑥

$$\begin{array}{r} 2 \\ 1 \\ + 4 \\ \hline \end{array}$$

⑦

$$\begin{array}{r} 4 \\ - 2 \\ \hline \end{array}$$

⑧

$$5 + 4 = \underline{\quad}$$

⑨

$$\begin{array}{r} 7 \\ - 3 \\ \hline \end{array}$$

⑩

$$6 + 2 + 7 = \underline{\quad}$$

⑪

$$3 + 9 = \underline{\quad}$$

⑫

$$\begin{array}{r} 68 \\ - 43 \\ \hline \end{array}$$



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9-972084

⑬

$$\begin{array}{r} 41 \\ + 14 \\ \hline \end{array}$$

⑭

$$16 - 9 = \underline{\quad}$$

⑮

$$\begin{array}{r} 2 \\ \times 3 \\ \hline \end{array}$$

⑯

$$\begin{array}{r} 36 \\ + 54 \\ \hline \end{array}$$

⑰

$$\begin{array}{r} 127 \\ + 545 \\ \hline \end{array}$$

⑱

$$2 \overline{)16}$$

⑳

$$\begin{array}{r} 8 \\ \times 4 \\ \hline \end{array}$$

㉑

$$\begin{array}{r} 20 \\ - 9 \\ \hline \end{array}$$

㉒

$$\begin{array}{r} 432 \\ - 323 \\ \hline \end{array}$$

㉓

$$\begin{array}{r} 391 \\ \times 3 \\ \hline \end{array}$$

㉔

$$3 \overline{)696}$$

㉕

$$11 \times 10 = \underline{\quad}$$

When you work with fractions, be sure to write your answer in simplest form.

②5

$$\frac{3}{11} + \frac{6}{11} = \underline{\hspace{2cm}}$$

②6

$$\frac{7}{9} - \frac{3}{9} = \underline{\hspace{2cm}}$$

②7

$$6 \overline{) 744}$$

②8

$$\begin{array}{r} 456 \\ \times 21 \\ \hline \end{array}$$

②9

$$\begin{array}{r} 48 \frac{2}{9} \\ - 29 \frac{1}{9} \\ \hline \end{array}$$

③0

$$0.431 - 0.398 = \underline{\hspace{2cm}}$$

③1

$$0.342 + 3.82 = \underline{\hspace{2cm}}$$

③2

$$\frac{1}{8} \times 8 = \underline{\hspace{2cm}}$$

When you work with fractions, be sure to write your answer in simplest form.

33

$$\begin{array}{r} 19.73 \\ \times 1.4 \\ \hline \end{array}$$

34

$$\frac{48}{64} = \underline{\hspace{2cm}}$$

35

$$\frac{1}{5} \div 2\frac{1}{2} = \underline{\hspace{2cm}}$$

36

$$14\frac{3}{8} + 15\frac{5}{6} = \underline{\hspace{2cm}}$$

37

$$-24 + -16 = \underline{\hspace{2cm}}$$

38

$$y + 12 = 6$$

$$y = \underline{\hspace{2cm}}$$

39

$$3y - 14 = 46$$

$$y = \underline{\hspace{2cm}}$$

40

$$\frac{y}{10} = -5$$

$$y = \underline{\hspace{2cm}}$$

Appendix P

French Translation of the Social Competence Scale

Échelle de compétence sociale

Veillez indiquer à quel point chacun des énoncés décrit l'enfant concerné(e) en vous servant de l'échelle suivante.

- 0. Ne décrit **pas du tout** l'enfant
- 1. Décrit **un peu** l'enfant
- 2. Décrit l'enfant de façon **assez vraie**.
- 3. Décrit l'enfant de façon **vraie**.
- 4. Décrit l'enfant de façon **très vraie**.

	Pas du tout	Un peu	Assez vrai	Vrai	Très vrai
1. Fonctionne bien malgré les distractions.					
2. Accepte que les choses n'aillent pas comme il (elle) veut.					
3. Accepte bien les défaites ou les échecs.					
4. Est une personne qui prend des initiatives.					
5. Travaille/joue bien sans le soutien d'un adulte.					
6. Accepte bien qu'on lui impose des limites raisonnables.					
7. Exprime ses besoins et ses sentiments de façon appropriée.					
8. Réfléchit avant d'agir.					
9. Résoud seul les problèmes qu'il (elle) rencontre avec ses pairs.					
10. Capable de demeurer concentré (e) sur son travail.					
11. Arrive à se calmer lorsqu'il (elle) est excité (e) et agité(e).					
12. Peut attendre patiemment en ligne lorsque nécessaire.					
13. Sensible aux sentiments des autres.					
14. Est conscient de l'impact de son comportement sur les autres.					
15. Travaille bien en groupe.					
16. Respecte les règles du jeu.					
17. Porte attention.					

18. Contrôle sa colère lors d'une dispute.					
19. Partage l'équipement et les jeux avec les autres.					
20. Coopère avec les autres enfants sans qu'on lui demande.					
21. Respecte les consignes de l'enseignant.					
22. Est serviable.					
23. Écoute le point de vue des autres.					
24. Fait part de ses suggestions et opinions sans les imposer.					
25. Est amical avec les autres.					

Appendix Q

French Translation of the Conners' Scale-Parent Version

ÉCHELLE DE COMPORTEMENT

Vous trouverez ci-dessous des énoncés décrivant des comportements d'enfants ou des problèmes qu'ils ont parfois. Lisez chaque énoncé attentivement et décidez du degré auquel votre enfant a souffert de ce problème durant la dernière année.

	Pas du tout	Un petit peu	Beaucoup	Énormément
1. Tripote ou ronge certaines choses (ongles, doigts, cheveux, vêtements).				
2. Insoient(e) avec les grandes personnes.				
3. A du mal à se faire des amis et à les garder.				
4. Excitable, impulsif(ive)				
5. Veut tout commander.				
6. Suce ou mâchonne (pouce, vêtements, couvertures).				
7. Pleure souvent ou facilement.				
8. Se sent attaqué(e), est sur la défensive.				
9. Rêvasse.				
10. A des difficultés d'apprentissage.				
11. Se tortille, ne tient pas en place.				
12. A peur (de nouvelles situations, de nouveaux endroits et de nouvelles personnes, ou de fréquenter l'école).				
13. Est agité(e), a toujours besoin de faire quelque chose.				
14. Est destructeur(trice).				

	Pas du tout	Un petit peu	Beaucoup	Énormément
15. Ment ou raconte des histoires qui ne sont pas vraies.				
16. Est timide.				
17. S'attire plus d'ennuis (se fait plus attraper) que les autres enfants de son âge.				
18. Ne parle pas comme les autres enfants de son âge (parle comme un bébé, bégaye, est difficile à comprendre).				
19. Nie ses erreurs ou accuse les autres.				
20. Est querelleur(euse).				
21. Fait la moue et boude.				
22. Prend les choses qui ne lui appartiennent pas.				
23. Est désobéissant(e) ou obéit à contrecœur.				
24. S'inquiète plus que les autres (de la maladie, de la mort, de la solitude).				
25. Ne termine pas ce qu'il (elle) a commencé.				
26. Est facilement froissé(e).				
27. Brutalise ou intimide ses camarades.				
28. Ne peut s'arrêter lors d'une activité répétitive.				
29. Est cruel(elle).				
30. A un comportement immature (demande qu'on l'aide pour quelque chose qu'il (elle) peut faire seul(e), est collant(e), a constamment besoin d'être rassuré(e).				
31. A des problèmes de fixation de l'attention, distractivité.				
32. Souffre de maux de tête.				

	Pas du tout	Un petit peu	Beau- coup	Énormé- ment
33. A des changements d'humeur rapides et marqués.				
34. N'obéit pas ou n'aime pas obéir aux règles, ou brave les interdits.				
35. Se bagarre constamment.				
36. Ne s'entend pas avec ses frères et soeurs.				
37. Se décourage facilement lorsqu'un effort est nécessaire.				
38. Dérange les autres enfants.				
39. Est-un(e) enfant foncièrement malheureux(euse).				
40. A des problèmes d'alimentation (a un mauvais appétit, se lève après chaque bouchée).				
41. Souffre de maux d'estomac.				
42. A des problèmes de sommeil (ne peut s'endormir, se réveille trop tôt, se réveille pendant la nuit).				
43. Se plaint d'autres maux physiques et de douleurs.				
44. Souffre de vomissements, de nausées.				
45. Se sent lésé(e) à la maison.				
46. Se vante, fanfaronne.				
47. Se laisse écraser, manipuler par les autres.				
48. A des problèmes d'évacuation intestinale (selles molles, irrégulières, constipation).				

Appendix R

Factor Loadings of Negative Behavioral Style at School Age- Mothers' Perspective

Factor Loadings of the Variables Included in the Factor of Negative Behavioral Style at School Age-Mothers' Perspective

Variables	Factor Loadings
Conduct Problems (Conners)	.79
Impulsive-Interactive Tendencies (Conners)	.83
Hyperactivity Index (Conners)	.92
Total Problem Behaviors (CBCL)	.83

Note. Eigenvalue = 2.85. Pct Var = 71.3%

Appendix S

French Translation of the Child Behavior Checklist – Teacher Version

CBCL-ENSEIGNANT/E

Voici une liste d'énoncés pouvant décrire les élèves. Veuillez évaluer chaque énoncé en fonction du comportement de l'élève au cours des deux derniers mois et encrer la cote appropriée. Veuillez encrer la cote 2 si l'énoncé est très vrai ou souvent vrai, la cote 1 si l'énoncé est ou parfois vrai et la cote 0 si l'énoncé ne correspond pas du tout à l'élève ou que vous n'avez pas suffisamment d'informations pour répondre à cette question.

2 = très vrai ou souvent vrai;

1 = parfois vrai;

0 = ne correspond pas du tout ou informations insuffisantes.

- | | | | | |
|---|---|---|-----|---|
| 0 | 1 | 2 | 1. | Se comporte d'une façon trop jeune pour son âge. |
| 0 | 1 | 2 | 2. | Fredonne ou fait d'autres bruits étranges en classe. |
| 0 | 1 | 2 | 3. | Se dispute beaucoup. |
| 0 | 1 | 2 | 4. | Ne termine pas les choses qu'il (elle) commence. |
| 0 | 1 | 2 | 6. | Défie quelqu'un de, ou répond de façon impolit au personnel enseignant. |
| 0 | 1 | 2 | 7. | Se vante. |
| 0 | 1 | 2 | 8. | Est incapable de se concentrer pour une longue période. |
| 0 | 1 | 2 | 9. | Ne peut cesser de penser à certaines choses, a des obsessions |
| 0 | 1 | 2 | 10. | Ne peut pas rester assis(e), est agité(e) ou hyperactif(ve). |
| 0 | 1 | 2 | 11. | S'accroche aux adultes ou est trop dépendant(e). |
| 0 | 1 | 2 | 12. | Se plaint de se sentir seul(e). |
| 0 | 1 | 2 | 13. | Confus(se) ou semble être dans le brouillard. |
| 0 | 1 | 2 | 14. | Pleure beaucoup. |
| 0 | 1 | 2 | 15. | A la bougeotte. |
| 0 | 1 | 2 | 16. | Est cruel(le), brutal(e) ou méchant(e) envers les autres. |
| 0 | 1 | 2 | 17. | Est perdu(e) dans ses rêveries ou dans ses pensées. |
| 0 | 1 | 2 | 18. | Se fait mal intentionnellement ou essaie de se suicider. |
| 0 | 1 | 2 | 19. | Exige beaucoup d'attention. |
| 0 | 1 | 2 | 20. | Détruit ses propres choses. |
| 0 | 1 | 2 | 21. | Détruit des objets qui appartiennent à d'autres personnes. |
| 0 | 1 | 2 | 22. | A de la difficulté à suivre les directives qu'on lui donne. |
| 0 | 1 | 2 | 23. | Est désobéissant(e) à l'école. |
| 0 | 1 | 2 | 24. | Dérange les autres élèves. |
| 0 | 1 | 2 | 25. | Ne s'entend pas avec les autres enfants. |
| 0 | 1 | 2 | 26. | Ne semble pas se sentir coupable après s'être mal comporté(e). |
| 0 | 1 | 2 | 27. | Est facilement jaloux(se). |
| 0 | 1 | 2 | 29. | A peur de certains animaux, de certaines situations ou d'endroits autres que l'école. |

0	1	2	31.	A peur d'avoir des mauvaises pensées ou de faire quelque chose de mal.
0	1	2	32.	Pense qu'il(elle) doit être parfait(e).
0	1	2	33.	Pense ou se plaint que personne ne l'aime.
0	1	2	34.	Pense qu'on le(la) persécute.
0	1	2	35.	Se croit bon(ne) à rien ou inférieur(e).
0	1	2	36.	Se fait souvent mal, est prédisposé(e) aux accidents.
0	1	2	37.	Se bagarre souvent.
0	1	2	38.	Se fait taquiner beaucoup.
0	1	2	39.	Fréquente des enfants qui attirent des ennuis.
0	1	2	40.	Croit entendre des sons qui n'existent pas (Expliquez).
0	1	2	41.	Est impulsif(ve) ou agit sans réfléchir.
0	1	2	42.	Aime la solitude.
0	1	2	43.	Ment ou triche.
0	1	2	44.	Ronge ses ongles.
0	1	2	45.	Nerveux(se), stressé(e), tendu(e).
0	1	2	47.	A une attitude trop conformiste face aux règlements.
0	1	2	48.	N'est pas aimé(e) par les autres élèves.
0	1	2	49.	A des difficultés d'apprentissage.
0	1	2	50.	Est trop peureux(se) ou anxieux(se).
0	1	2	52.	Se sent trop coupable.
0	1	2	53.	N'attend pas son tour pour parler.
0	1	2	57.	Attaque les gens physiquement.
0	1	2	60.	Est apathique et manque de motivation.
0	1	2	61.	Travaille mal à l'école.
0	1	2	62.	Est mal coordonné(e) ou maladroit(e).
0	1	2	63.	Préfère jouer avec des enfants plus âgés.
0	1	2	64.	Préfère jouer avec des enfants plus jeunes.
0	1	2	65.	Refuse de parler.
0	1	2	66.	Répète sans cesse certains actes; est compulsif(ve) (expliquez).
0	1	2	67.	Dérange la classe.
0	1	2	68.	Hurle beaucoup.
0	1	2	69.	Est renfermé(e), garde les choses pour lui(elle) même.
0	1	2	70.	Voit des choses qui ne sont pas là (expliquez).
0	1	2	71.	Est timide ou facilement embarrassé(e).
0	1	2	72.	Son travail n'est pas ordonné.
0	1	2	74.	Fait le (la) fin(e) ou le bouffon.
0	1	2	75.	Est gêné(e) ou timide.
0	1	2	76.	Son comportement est explosif et imprévisible.
0	1	2	77.	Ses demandes doivent être comblées immédiatement et il (elle) est facilement frustré(e).
0	1	2	78.	N'est pas attentif(ve) et est facilement distrait(e).
0	1	2	80.	A le regard vague.
0	1	2	81.	Se sent blessé(e) lorsqu'il (elle) est critiqué(e).

0	1	2	82.	Vole.
0	1	2	84.	A des comportements étranges (expliquez).
0	1	2	85.	A des idées étranges (expliquez).
0	1	2	86.	Est entêté(e), maussade ou irritable.
0	1	2	87.	A des sautes d'humeur ou de sentiments soudains.
0	1	2	88.	Boude beaucoup.
0	1	2	89.	Est méfiant(e).
0	1	2	90.	Sacre ou se sert de mots obscènes.
0	1	2	92.	Ne fournit pas son rendement maximum.
0	1	2	93.	Parle trop.
0	1	2	94.	Taquine beaucoup.
0	1	2	95.	A des accès de colère, des crises ou s'emporte facilement (expliquez).
0	1	2	97.	Menace les gens.
0	1	2	98.	Est en retard à l'école ou en classe.
0	1	2	100.	Ne fait pas ses travaux.
0	1	2	101.	Fait l'école buissonnière, manque l'école.
0	1	2	102.	Est trop peu actif(ve), fait des mouvements lents ou manque d'énergie.
0	1	2	103.	Est malheureux(se), triste ou déprimé(e).
0	1	2	104.	Est exceptionnellement bruyant(e).
0	1	2	105.	Prends de l'alcool ou de la drogue (expliquez).
0	1	2	106.	Est très anxieux(se) de plaire.
0	1	2	108.	A peur de commettre des erreurs.
0	1	2	111.	Est renfermé(e), ne se mêle pas aux autres.
0	1	2	112.	Se fait des soucis.
0	1	2	113.	Veuillez indiquer tout problème que l'élève présente et que nous n'avons pas mentionné ci-dessus.

Appendix T

French Translation of the Conners' Scale – Teacher version

Questionnaire de Connors pour les enseignants

Vous trouverez ci-dessous des énoncés décrivant des comportements d'enfants qui se rencontrent parfois en milieu scolaire. Placez une croix dans la colonne qui décrit le mieux l'élève concerné(e). Répondez à toutes les questions.

	Pas du tout	Un petit peu	Beaucoup	Énormément
1. Est agité(e), se tortille sur sa chaise.				
2. Fait des bruits inappropriés quand il ne faut pas.				
3. Ses demandes doivent être satisfaites immédiatement.				
4. Est impertinent(e), effronté(e).				
5. Fait des crises de colère et a des conduites imprévisibles.				
6. Est trop sensible à la critique.				
7. Est distrait(e).				
8. Perturbe les autres élèves.				
9. Est rêveur(euse).				
10. Fait la moue et boude.				
11. A une humeur qui change rapidement et de façon marquée.				
12. Est bagarreur(euse).				
13. A une attitude soumise à l'égard de l'autorité.				
14. Est agité(e), va constamment à droite et à gauche.				

	Pas du tout	Un petit peu	Beaucoup	Énormément
15. S'excite facilement, est impulsif(ive).				
16. Demande une attention excessive de l'enseignant.				
17. Semble mal accepté(e) par le groupe.				
18. Se laisse mener par les autres élèves.				
19. Est mauvais(e) joueur (euse).				
20. Semble manquer de capacités à entraîner ou à mener les autres.				
21. A de la difficulté à terminer ce qu'il (elle) commence..				
22. Est puéril(e), immature.				
23. Nie ses erreurs ou accuse les autres.				
24. A de la difficulté à s'entendre avec les autres élèves.				
25. Coopère peu avec ses camarades de classe.				
26. S'énervé facilement quand il (elle) doit faire un effort.				
27. Coopère peu avec l'enseignant.				
28. A des difficultés d'apprentissage.				

Appendix U

Factor Loadings of Negative Behavioral Style at School Age- Teachers' perspective

Factor Loadings of the Variables Included in the Factor of Negative Behavioral Style at School Age-Teachers' Perspective

Variables	Factor Loadings
Prosocial behaviors (Social Competence Scale)	-.84
Hyperactivity Index (Conners)	.88
Total Problem Behaviors (CBCL)	.89

Note. Eigenvalue = 2.27. Pct Var = 75.8%

Appendix V

French Translation of the Parent-Teacher Involvement Questionnaire- Teacher Version

Les parents et l'école
Version pour enseignants

Veuillez répondre aux questions suivantes portant sur votre collaboration avec les parents de l'enfant concerné(e) et sur leur implication dans le processus scolaire.

1. Utilisez l'échelle suivante afin d'indiquer la fréquence à laquelle les parents de l'enfant participent aux activités mentionnées:

- 0. Jamais
- 1. Quelquefois durant l'année
- 2. Presque tous les mois
- 3. Presque toutes les semaines
- 4. Plus d'une fois par semaine

	Jamais	Quelquefois durant l'année	Presque tous les mois	Presque toutes les semaines	Plus d'une fois par semaine
a) Contacter l'enseignant afin de l'interroger ou de lui faire part d'informations concernant l'enfant.					
b) Participer à des événements scolaires, tels que les spectacles, sorties, levées de fonds, travail bénévole (N.B. Soulignez les événements en question).					
c) Participer aux rencontres entre parents et enseignants afin de discuter du progrès de l'enfant.					
d) Faire partie de l'association de parents et/ou de l'administration scolaire.					

2. A votre connaissance, à quelle fréquence les parents de l'enfant concerné(e) fournissent-ils des efforts pour promouvoir le succès scolaire de leur enfant, par exemple aider l'enfant à compléter ses devoirs et leçons, lire avec l'enfant, jouer à des jeux éducatifs?

- 0. Jamais
- 1. Rarement
- 3. Occasionnellement
- 4. Fréquemment
- 5. Ne sait pas

3. Sentez-vous que ces parents sont réceptifs à vos commentaires et suggestions et sont intéressés à les appliquer?

- 1. Pas vraiment
- 2. Plus ou moins
- 3. Tout à fait

4. À votre avis, ces parents considèrent-ils l'éducation comme une valeur essentielle?

- 1. Pas vraiment
- 2. Plus ou moins
- 3. Tout à fait

Commentaires:

Appendix W

Testing Protocol: Parent-Child Study

PARENT-CHILD/HEALTH CANADA:Error! Bookmark not defined.
Full Protocol

DAY 1 PROTOCOL:

- 1- Examiner:**
- takes care of introductions,
 - builds rapport with child,
 - explains general Day 1 procedures to Ss,
 - makes sure mother has read and signed consent form,
 - administers HOME interview items as part of the warm-up conversation,
 - explains saliva sampling and obtains a sample from both of them **immediately before standard testing** (record the time that all samples are taken on the appropriate form).

- Interviewer:**
- chooses the most appropriate room for interaction series,
 - sets up camera and materials for Series 1 in the standard order (see toy layout sheet),
 - removes all other unnecessary materials,
 - unplugs that room's telephone if present,
 - and attempts to remain as invisible to the child as possible until Series 2.
- (±20 min.).

- 2- Examiner:** - begins administering Bayley II or SB4.

- Interviewer:**
- a) if mother does not need to stay with child (for SB4): Interviewer begins administering the demographic, obstetric, temperament and health questionnaires to her;
 - or b) if mother needs to stay with her child, the Interviewer can supervise siblings, do HOME observation items, score/enter data, or read a good book!!!

(30-60 min. or whatever the child can handle)

- BREAK**
- The 2nd saliva sample is taken from both mother and child immediately (±10 min.) following standard testing. Examiner asks mother to come, if she's with Interviewer.
 - Make sure you ask Ss if they need to go to the bathroom or get a change of diaper.
 - If needed, Interviewer informs Examiner of interaction setup location.)

- 3-** Before bringing Ss to the interaction room, the Examiner gives mother the following Series 1 instructions.

Série 1

"Maintenant, on aimerait vous voir jouer ensemble. Comme tu sais, on va enregistrer ça sur vidéo. Donc, pour être sûr que vous restiez tous(tes) les deux bien en vue pendant qu'on filme, c'est très important que vous restiez assis(es) tous(tes) les deux sur le tapis qu'on a mis par terre. Moi, je vais rester silencieuse derrière la caméra pour être bien sûr qu'elle fonctionne bien. Donc, essayez d'être le plus naturels possible et faites comme si je n'étais pas là. Alors, la première chose qu'on aimerait que tu fasses est simplement de jouer avec (ENFANT) comme vous le faites d'habitude pendant environ 15 minutes. Vous pouvez prendre n'importe quel des jouets sur le tapis. Puis, quand tu entendas l'alarme sonner, tu pourras arrêter de jouer. As-tu des questions? C'est très important aussi que tu attendes mon signal avant de commencer à jouer, OK?"

Examiner then gets Ss settled on the carpet and instructs child (if s/he can understand such instructions) to remain within its limits; e.g.:

"Maintenant, (CHILD), tu vas jouer avec maman, mais j'aimerais que tu restes sur le tapis. Fais comme si le tapis était ton carré de sable et que c'est défendu de sortir du carré de sable..." etc.

Examiner goes behind the camera and tells mother they can begin. Examiner is responsible for timing Series 1, 2, and 3. The beeper should be started and stopped over the microphone so the coders are clear about when to begin and end coding that episode. [If there is an interruption of filming during the **first** half of the series (e.g., bathroom), reset the timer to 15 min. and start over. If the interruption occurs in the **second** half of the series **and** lasts less than 2 min., just pause and restart timer when the interaction resumes; but if the trip takes **more** than 2 min., Series 1 will have to be repeated at the end of Day 2.]

At the end of Series 1, Examiner administers "Maternal perceptions" questionnaire. If mother reports a score of 1 or 2, thus indicating that either her or her child's behavior was not natural, Series 1 should be repeated on Day 2.

(±20 min.)

BREAK - Everybody leaves interaction room during break so that the interviewer can reposition materials for Series 2, and position a barrier (e.g., Fisher Price gate, a playpen) that will safely prevent 12-36 mo. child from leaving interaction room during separation episode.

- Bathroom check

4- While the Examiner supervises the child away from the interaction room, she asks mother to join the Interviewer there. The Interviewer will then give mother the following Series 2 instructions so as not to be heard by child. (If child becomes upset about his/her mother's departure, Examiner will give her the instructions in the child's presence.)

Série 2

FREE PLAY (4 MIN)

"La prochaine période de jeux va aussi être filmé mais va avoir 4 parties: En premier, tu va recommencer à jouer avec (ENFANT) comme tantôt, mais juste pour une couple de minutes jusqu'à ce que tu entendes l'alarme sonner, comme tantôt."

PUZZLES (7 MIN, 4 MIN for 12-36 cohort)

"A ce moment-là, pousse les jouets de côté et choisis un casse-tête à faire avec (ENFANT). (FOR OLDER COHORT, EXPLAIN TO MOTHER THE LABELLED BAGS OF PUZZLE PIECES AND THEIR CORRESPONDING BOARDS). Si vous finissez ce casse-tête-là, vous pouvez travailler sur un autre. Après quelques minutes, l'alarme va sonner de nouveau et je vais entrer pour m'asseoir ici." (PRESS BEEPER WHEN THEY BEGIN WORKING ON THE PUZZLE)

Interviewer comes in at the beep and waits next to the door until mother has left. Then s/he puts the barrier in place (for 12-36 mo. cohort) and sits down on a chair so as not to face child directly. Interviewer then gets busy with paperwork interacting as little as possible with child (i.e., s/he should not look at, speak to, or touch the child unless s/he is in danger of harming him/herself).

SEPARATION AND REUNION (2+4=6 MIN)

"A ce moment-là, tu sortiras de la pièce pour laisser (ENFANT) jouer tout seul avec les jouets. Et pour être sûr qu'il/elle ne te suivra pas quand tu va sortir, je vais placer une barrière en travers la porte/arche. Bien sûr, si (ENFANT) devient trop dérangé par ton absence, ou si tu te sens mal à l'aise, on arrêtera puis tu pourras le/la rejoindre. Sinon, après une couple de minutes, je vais sortir pour te dire que c'est le temps d'aller rejoindre (ENFANT) sur le tapis. Puis, tu passera 3-4 minutes de plus avec lui/elle et on te laissera savoir quand tout est fini."

Examiner programs beeper for 6 min. and presses "start" when mother exits the room. Then, after 2 minutes, she signals Interviewer to go get mother by pressing "pause" and presses "start" again when mother comes in. Examiner should keep child in view during separation and reunion episodes.

"Donc, pour résumer, commencez par jouer ensemble comme vous le faites d'habitude; puis, quand tu entendras l'alarme, pousse les jouets de côté et choisis un casse-tête. Quand tu me verras entrer, sors de la pièce jusqu'à ce que je te dise te rejoindre (ENFANT). J'ai une petite liste qui pourra t'aider à te souvenir des étapes, et je vais la placer juste ici. As-tu des questions? J'aimerais juste te rappeler encore de rester sur la couverture pour que vous puissiez rester bien en vue."

J'aimerais aussi quand tu sortiras que tu restes invisible pour (ENFANT), mais assez près pour entendre l'alarme. N'oublie pas d'attendre le signal avant de commencer, OK?"

At the end of Series 2, Interviewer takes cortisol sampling and then administers "Maternal perceptions" questionnaire. If mother reports a score of 1 or 2, Series 2 should be repeated on Day 2. The interviewer then takes the final saliva sample from both the parent and her child.

(± 25 min.)

5- At the end of Day 1, Interviewer administers Day 1 Touch Questionnaire, gives instructions for mother and father questionnaire packages, and summarizes Day 2 procedures.

N.B. If child needs to nap during Day 1, Interviewer can take that opportunity to begin interviews with mother.

Total time, 2-3 hours

Fill out the VideoTape log sheet. Clean Bayley II and toys between each visit

DAY 2 PROTOCOL:

1- Examiner reconnects with child. Rapport building between Interviewer and mother, this includes Day 2 general instructions.

(± 15 min)

2- Examiner finishes Bayley II or SB4. If mother does not need to stay with child, Interviewer answers any questions she might have about the questionnaires and finishes interviewing her. But if mother still needs to stay with child, Interviewer can set up Series 3 materials.

BREAK - Series 3 setup, if not done already

(± 10 min.)

- Bathroom check

3- While Examiner supervises child away from interaction room, she tells mother to go to the interaction room to meet Interviewer who gives her the following Series 3 instructions so as not to be heard by child. If child becomes upset about mother's departure, the Examiner gives her the instructions in the child's presence.

Série 3

FREE PLAY (4 MIN)

"C'est la dernière fois qu'on va vous filmer, et il y a 4 choses qu'on aimerait que vous fassiez ensemble. D'abord, comme l'autre jour, on aimerait que tu joues avec (ENFANT) comme vous le faites d'habitude avec les jouets jusqu'à ce que tu entendes l'alarme sonner.

COMMAND TASK (3 MIN) NOT DONE FOR 12-24 MO. CHILDREN

A ce moment-là, vous aller arrêter de jouer pour faire quelque chose de complètement différent. Pour les 2-3 prochaines minutes, j'aimerais que tu demandes à (ENFANT) de faire quelques petites tâches pour toi. Tiens, voilà une liste de tâches que tu peux utiliser (GIVE HER THE PAD). Comme tu peux voir, il y en a qui sont plus difficiles que d'autres; c'est parce qu'on visite différentes familles avec des enfants d'âges différents. Celles du début sont plus faciles que celles de la fin (READ FIRST 3 AND LAST 3). On aimerait que tu prennes au moins 4 ou 5 des tâches de la liste. Tu peux en prendre plus si tu veux et tu peux même inventer tes propres tâches, mais pourvu que (ENFANT) n'ait pas à sortir de la pièce. Le pad sera placé tout près du tapis. (PRESS BEEPER WHEN MOTHER BEGINS INTRODUCING TASK)

INTERFERENCE TASK (3 MIN)

Quand tu entendas l'alarme sonner, vous arrêterez pour faire autre chose encore. On aimerait voir comment (ENFANT) réagit quand tu es très occupée. Tu sais comment c'est des fois quand tu es au téléphone ou bien en train de faire à manger et que c'est pas possible de lui donner toutes l'attention qu'il/elle demande. Pour observer ça, on aimerait que tu tournes la page sur ton pad pour remplir les questionnaires qui sont juste en-dessous (SHOW HER). Et pendant que tu les remplis, on aimerait que tu te retournes un peu pour lui faire comprendre que ce que tu fais est très important. (ENFANT) pourra continuer à jouer avec les jouets pendant ce temps-là; mais assure-toi encore qu'il/elle reste assis(e) sur le tapis. Tu continueras de travailler sur les questionnaires jusqu'à ce que tu entendes une autre alarme. (PRESS BEEPER WHEN MOTHER BEGINS QUESTIONNAIRE)

FREE PLAY (4 MIN)

A ce moment-là, mets le pad de côté et recommence à jouer avec (ENFANT) comme vous le faites d'habitude jusqu'à ce l'alarme te dise que c'est fini. N'oublie pas de rester à l'intérieur des limites du tapis pour que la caméra puisse vous garder tous les deux bien en vue.

Donc, en résumé, commencez par jouer avec (ENFANT) comme vous le faites d'habitude; ensuite, quand tu entends la 1ère alarme, prends le pad et fais-lui faire des tâches; puis, à la 2e alarme, commence à travailler sur le questionnaire jusqu'à ce que tu entendes la 3e alarme. A ce moment-là, tu recommences simplement à jouer avec (ENFANT). Comme la dernière fois, on a une petite liste qui va t'aider à te rappeler des étapes. As-tu des questions? N'oublie pas d'attendre le signal avant de commencer, OK?"

At the end of Series 3, Interviewer administers "Maternal perceptions" and "Touch" questionnaires.

(+25 min.)

BREAK

+10 min.

4- Examiner administers the "Parenting Practices Interview", investigate any clinical concerns that might have arisen through other questionnaires,

administers the remaining HOME interview items and the SCID modules (if required). Meanwhile, the Interviewer administers the Peabody to the child. When Examiner is done with her interviews, the Interviewer joins her for the wrap-up.

(±60 min. or more, as needed)

Fill out the VideoTape log sheet. Clean Bayley II and toys between each visit.

Appendix X
Consent Form for School Study

«L'INDIVIDU DANS SON MILIEU: Les parents et leurs enfants»

Directeurs du projet: -Lisa A. Serbin, Ph.D.

-Dale M. Stack, Ph.D.

Numéro d'identification: _____

Formulaire de consentement

Je, soussigné(e), autorise les chercheurs du projet «*L'individu dans son milieu*» de l'université Concordia à rencontrer mon enfant _____, à l'école durant la période de classe et à avoir accès à son dossier scolaire. Je suis informée que durant la rencontre, mon enfant aura à remplir quelques questionnaires permettant d'évaluer son rendement scolaire et aussi, à répondre à différentes questions portant sur sa vie à l'école. Je comprends que toute l'information recueillie demeurera confidentielle et qu'elle ne servira qu'à des fins de recherche.

Dans l'éventualité où j'aurai des questions concernant cette recherche, je pourrai m'adresser soit à Nadine Girouard ou bien à Christina Saltaris au (514) 848-2253.

Nom: _____
EN LETTRES MOULÉES

Date: _____

Signature: _____

Nom de l'enseignant/e:

Nom du directeur/de la directrice:

Nom de l'école:

Numéro de téléphone:

Adresse:

Appendix Y

Factors Created for Analyses in Part III

Factor Loadings of the Variables Included in the Factor of Parenting Context

Variables	Factor Loadings
Socioeconomic Status	.82
Maternal Hardship	-.82

Note. *Eigenvalue* = 1.34. *Pct Var* = 67.0%

*Factor Loadings of the Variables Included in the Factor of Social/Behavioral Adjustment at
Preschool Age*

Variables	Factor Loadings
Preschool work-related skills	.79
Preschool behavioral/interpersonal style	-.79

Note. *Eigenvalue* = 1.26. *Pct Var* = 62.9%

Appendix Z

Factor Loadings of Social/Behavioral Maladjustment at School Age

Factor Loadings of the Variables Included in the Factor of Social/Behavioral Maladjustment at School Age

Variables	Factor Loadings
Behavioral Style at School Age- Mothers' perspective	.54
Behavioral Style at School Age- Teachers' perspective	.92
Work-related skills at school age	-.89

Note. *Eigenvalue* = 1.93. *Pct Var* = 64.2%