



THE SurvEd KIT FOR SUCCESS IN SCHOOL

SURV FOR SURVEY, ED FOR EDUCATION

A LONGITUDINAL SURVEY TO EXPAND OUR KNOWLEDGE OF CHILD DEVELOPMENT AND CHILDREN'S ACADEMIC TRAJECTORIES

The *Québec Longitudinal Study of Child Development* (QLSCD), also known as "I am, I'll be," is being conducted by the Institut de la statistique du Québec in collaboration with a number of partners. ***The main goal of the survey is to identify the factors, which observed in early childhood, contribute to social adjustment and academic success among Québec children.*** By helping us gain a better understanding of the factors that influence child development, the survey can contribute to planning policies and programs for children, youth and their families.

FACT SHEETS TO EXPAND KNOWLEDGE AND FOSTER ACTION

The Institut de la statistique du Québec has produced numerous publications based on data collected in the various rounds of the QLSCD to document the development of children from their entry into the education system and their progress through it. ***Based on these publications, the SurvEd kit makes productive use of QLSCD results by making them more accessible to stakeholders and everyone involved in keeping children in school and concerned about their academic performance – to everyone who has our children's future at heart!***

Each fact sheet presents a brief summary of selected results which cover children's academic achievement. In addition to highlights of research findings, each fact sheet includes suggested intervention paths drawn from the relevant ISQ publications.

The 13 fact sheets which comprise this kit cover various topics such as school readiness, parent-school relations, motivation, victimization, academic performance, the risk of school dropout, and the introduction to smoking, alcohol and drug use during the transition from elementary to high school.

These fact sheets are not meant to be exhaustive nor do they present all the nuances contained in the original publications. It is therefore recommended to read the latter when more detail is desired.

To learn more about the QLSCD and access the fact sheets in the kit, visit our website at www.iamillbe.stat.gouv.qc.ca

A STUDY ON THE FUTURE OF A GENERATION



The initial sample of the QLSCD comprised 2,120 children born to mothers residing in Québec in 1997-1998. The survey therefore does not include children who arrived in Québec after their birth.

The children have been monitored annually from the age of 5 months to 15 years, except at 9, 11 and 14 years. During each round, data were collected from the parents using questionnaires. In addition, the children were invited to participate in one or more activities or to respond to a questionnaire designed to assess their development. In kindergarten and elementary school, their main teachers were also asked to respond to a questionnaire covering various aspects of child development and social adjustment.

Partners involved in producing this kit:

Institut
de la statistique
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La Fédération
des commissions
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The authors who collaborated in writing Institut publications based on the wealth of data from the QLSCD.

In addition to those produced by the Institut, many research articles and papers have been published based on data from the QLSCD. They are helping us gain a better understanding of the various factors that influence child development. To access these publications, go the following web page of the Institut: http://www.iamillbe.stat.gouv.qc.ca/autres_pub_an.htm

01 SCHOOL READINESS

1 CONTEXT

The importance of school readiness for academic success is widely recognized. Numerous studies conducted in Canada and elsewhere have shown that the level of a child's development at the end of kindergarten is strongly associated with his/her health and future capacity for social and academic adjustment.

SOURCE

This fact sheet is a brief summary of the results presented in two publications: DESROSIERS, Hélène (2013). "Early Childhood Characteristics and School Readiness: The Importance of a Family's Social Support," *Portraits and Pathways. QLSCD Series*, Institut de la statistique du Québec, No. 18, April. http://www.stat.gouv.qc.ca/statistiques/sante/bulletins/portrait-201304_an.pdf

DESROSIERS, Hélène, Karine TÊTREAU and Michel BOIVIN (2012). "Demographic, socioeconomic, and neighbourhood characteristics of vulnerable children at school entry," *Portraits and Pathways. QLSCD Series*, Institut de la statistique du Québec, No. 14, May. http://www.stat.gouv.qc.ca/statistiques/sante/enfants-ados/adaptation-sociale/enfants-vulnerables_an.html

Note that the QLSCD has been following a cohort of children who were born in Québec in 1997-1998.

2 HIGHLIGHTS

Nearly 25% of children born in Québec at the end of the 1990s were considered vulnerable at the end of kindergarten in at least one domain of development – physical, cognitive, or socioemotional. These children presented deficits in fine motor skills, such as holding a pencil, or certain general health and wellness problems, or had difficulty getting along with their peers, following class rules and routines, listening, adapting to change, etc.

Certain characteristics of the child, family or social environment in which he/she was growing up contributed to increasing the risk of he/she being vulnerable in one or another domains of development at the end of kindergarten:

- Birth weight lower than 2,500 g.
- Having a mother who believes she does not have much influence on the development of her child (child 5 months old).
- Had not yet said the name of a familiar object (at 1½ years of age).
- Did not have a parent or other adult who was reading to him/her daily (at 1½ years of age).
- Had parents who received a comparatively lower level of support from family, friends, and others (at 2½ years of age).
- Presented more symptoms of hyperactivity-inattention (at 4 years of age).
- Had parents who had separated/divorced in the previous two years.
- Had a mother who did not have a high school diploma.
- Was exposed to a second language.
- Was living in a less safe neighbourhood and where neighbours helping each other was comparatively less prevalent.

Other risk factors, but only among children whose families did not have much social support, were symptoms of moderate to severe depression in the mother when the child was 5 months old and his/her health was perceived as not being optimal in the first few years of life.

The academic performance of nearly half of children (46%) considered vulnerable at the end of kindergarten was below average at the end of Grade 4 in elementary school compared to only 14% of children not considered vulnerable.



2 HIGHLIGHTS (continued)

While many of the aforementioned characteristics were associated with vulnerability in only one domain of development, some constituted risk factors in more than one. For example, a low level of support from family, friends and others, or low birth weight, were associated with an increased risk of being vulnerable in the two domains of language and cognitive development, and communication skills and general knowledge.

3 OF NOTE

Attending a CPE (public childcare centre) at 2½ years of age was associated with a lower risk of presenting problems in social competence.

4 DEFINITIONS AND MEASUREMENT INSTRUMENTS

Vulnerability

Children's vulnerability was assessed at the end of kindergarten by having their teachers fill out the Early Development Instrument (EDI). Children recognized as incapable of participating because of autism or mental incapacity and those who were in a special needs class were excluded. The assessment covered the following five domains of development:

- **Physical health and well-being** – General physical development, motor skills, diet and dress, cleanliness, punctuality, alertness.
- **Social competence** – Social skills, self-confidence, sense of responsibility; respect for peers, adults, rules and routines; work habits and autonomy, curiosity.
- **Emotional maturity** – Pro-social behaviour and helpful to others (voluntary intention to help others), fear and anxiety, aggressive behaviour, hyperactivity and inattention, expression of emotions.
- **Language and cognitive development** – Interest in and skills in reading, writing and mathematics; competencies in language.
- **Communication skills and general knowledge** – Ability to communicate and be understood, ability to understand others, clear articulation, general knowledge.

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INTERVENTION PATHS

The results underline the importance of fostering a healthy environment at birth and providing better support for parents of young children, particularly those whose child has health or developmental problems. Programs and services designed to promote children's social skills in various aspects of their lives before school entry or helping children of recently separated/divorced parents would also be helpful.



FACT SHEET 02 VOCABULARY ACQUISITION IN KINDERGARTEN

1 CONTEXT

Children's academic performance is largely determined by what they learned at an early age. Difficulties in a child's school trajectory can have their roots in the first few years of life. It is therefore important to prepare children as much as possible before their entry into the education system, particularly in terms of vocabulary.

SOURCE

This fact sheet is a brief summary of the results presented in the following fascicle: DESROSIERS, Hélène, and Amélie DUCHARME (2006). "Starting school on the right foot: Factors associated with vocabulary acquisition at the end of kindergarten," in *Québec Longitudinal Study of Child Development (QLSCD 1998-2010)*, Institut de la statistique du Québec, Vol. 4, Fascicle 1. http://www.iamillbe.stat.gouv.qc.ca/pdf/publications/feuillelet/fascicule_ecole_bon_pied_an.pdf

2 HIGHLIGHTS

In kindergarten, approximately 10% of children presented a persistent delay in terms of receptive vocabulary – i.e. understanding words – in comparison with their peers of the same age.

In addition, shyer children or those having higher anxiety levels when separated from their parents or from people to whom they are attached, presented a smaller vocabulary compared to their peers in kindergarten of the same age.

Children with the following characteristics during early childhood were at higher risk of presenting a vocabulary delay in kindergarten:

- Were exposed to a second language.
- Had lived in a low-income household at one time or other since birth.
- Weighed less than 2,500 g at birth.
- Had presented a less favourable health status at one time or another since birth.
- Were in a family that did not get along or communicate well.

In contrast, the following characteristics were associated with a lower risk of presenting a vocabulary delay in kindergarten:

- Was older than other children in kindergarten.
- Had a mother who had a university degree.
- Was regularly read to before the age of 3½ years.

There was no difference between boys and girls in terms of word comprehension at the end of kindergarten.



3 OF NOTE

Monitoring multilingual children throughout their educational trajectory would be needed to determine whether delays recorded at the end of kindergarten persist or can be attributed to transitory difficulties.

4 DEFINITIONS AND MEASUREMENT INSTRUMENTS

Delay in vocabulary

In the QLSCD, a delay is defined as being relative, in other words in comparison with other children, not based on clinical criteria. The range of vocabulary was assessed by testing “receptive vocabulary.”

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INTERVENTION PATHS

While targeting a healthy environment at birth and support for families, a productive means of fostering vocabulary development in young children would be early stimulation activities in preschool to instill an interest in reading.

1 CONTEXT

Strong associations have been observed between children's readiness for school and their future academic performance and social adjustment. Indeed, children who are less prepared at their entry into school are more likely to present academic difficulties, behavioural problems, and/or social maladjustment.

SOURCE

This fact sheet is a brief summary of the results presented in the following fascicle: LEMELIN, Jean-Pascal, and Michel BOIVIN (2007). "Success starts in grade 1: The importance of school readiness," *Québec Longitudinal Study of Child Development (QLSCD 1998-2010) – From Birth to 7 years of Age*, Institut de la statistique du Québec, Vol. 4, Fascicle 2.
http://www.iamillbe.stat.gouv.qc.ca/pdf/publications/feuille/Fasc2Vol4_an.pdf

Note that the QLSCD has been following a cohort of children who were born in Québec in 1997-1998.

2 HIGHLIGHTS

The results of two measurement instruments used to assess child development at the end of kindergarten showed that boys entering Grade 1 were less ready than girls in terms of responding to the demands and expectations of the education system.

The level of school readiness also varied with socioeconomic status. For example, children from low-income families scored lower in general than their peers in the Lollipop Test and in the five domains of development assessed using the Early Development Instrument (EDI), namely:

- Physical health and well-being
- Social competence
- Emotional maturity
- Language and cognitive development
- Communication skills and general knowledge.

The socioeconomic status of the child and the results obtained in the following three domains of child development contributed to predicting academic performance in Grade 1:

- Language and cognitive development (the strongest predictor)
- Communication skills and general knowledge
- Physical health and well-being.

The fact that children from disadvantaged families presented lower academic performance in Grade 1 can be largely explained by the fact that they were less prepared to face the demands of school in kindergarten.



3 DEFINITIONS AND MEASUREMENT INSTRUMENT

Early Development Instrument (EDI)

The EDI was developed for teachers to assess children's readiness for school. It assesses five domains:

- **Physical health and well-being** – General physical development, motor skills, diet and dress, cleanliness, punctuality, alertness.
- **Social competence** – Social skills; self-confidence; sense of responsibility; respect for peers, adults, rules and routines; work habits and autonomy; curiosity.
- **Emotional maturity** – Pro-social behaviour and helpful to others (voluntary intention to help others), fear and anxiety, aggressive behaviour, hyperactivity and inattention, expression of emotions.
- **Language and cognitive development** – Interest in and skills in reading, writing and mathematics; competencies in language.
- **Communication skills and general knowledge** – Ability to communicate and be understood, ability to understand others, clear articulation, general knowledge.

Lollipop Test

This test administered to the children, comprising four subtests, assessed:

1. Identification of colours and shapes, and copying shapes.
2. Spatial recognition.
3. Identification of numbers, and counting.
4. Identification of letters, and writing.

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INTERVENTION PATHS

These results indicate the importance of early intervention to foster the development of skills needed for academic success, particularly among children from disadvantaged families. Cognitive development and language skills can be fostered by interventions designed to improve the quality of parent-child interactions and pre-school daycares.

1 CONTEXT

Attention Deficit Disorder with or without Hyperactivity manifests in childhood and can lead to problems in school and low self-esteem which persist into adulthood. Although attention deficit is often diagnosed around the age of 7 years, its manifestations can be present before a child enters the education system.

SOURCE

This fact sheet is a brief summary of the results presented in the following article: CARDIN, Jean-François, Hélène DESROSIERS, Luc BELLEAU, Claudine GIGUÈRE and Michel BOIVIN (2011). "Hyperactivity and Inattention Symptoms in Children, from Preschool Years To Grade 2," *Portraits and Pathways. Québec Longitudinal Study of Child Development – QLSCD Series*, Institut de la statistique du Québec, No. 12, June. http://www.stat.gouv.qc.ca/statistiques/sante/bulletins/portrait-201106_an.pdf

2 HIGHLIGHTS

Based on data collected from the parents, the children could be categorized into four groups according to the development of hyperactivity or inattention symptoms from 3½ to 8 years of age:

- The first two groups comprised children who manifested few or very few symptoms of hyperactivity or inattention (39% and 15%).
- The third group included children in whom a number of hyperactivity or inattention behaviours were sometimes observed or certain behaviours often observed (38%).
- The fourth group was composed of children who presented a high level of hyperactivity or inattention symptoms (8%) during this period of childhood.

These four groups were found among both boys and girls. However, proportionally more boys than girls presented chronic levels, moderate or high, of hyperactivity or inattention symptoms from 3½ to 8 years of age.

The teachers' assessments were consistent with those of the parents. For example, children in the fourth group presented more hyperactivity/inattention behaviours at the age of 8 years as reported by their teachers. They also presented lower academic performance than those in the three other groups.

When we examined the development of hyperactivity and inattention symptoms separately, we observe that from 3½ to 8 years of age, 9% of the children chronically presented a high level of hyperactivity symptoms, while nearly 4% presented a high level of inattention symptoms.

From 3½ to 8 years of age, we observed the early appearance and relative stability of hyperactivity and inattention symptoms.



3 OF NOTE

Approximately 7% of children 8 years of age had already been diagnosed with Attention Deficit Disorder with or without Hyperactivity (ADD/H) by a health specialist, while 6% had taken Ritalin® or another medication to treat hyperactivity or inattention in the 12 months preceding the survey.

Nearly three-quarters of the children presenting a high level of hyperactivity or inattention symptoms from 3½ to 8 years of age were not considered to have a handicap, adjustment difficulties or learning problems and were in a regular class in Grade 2 of elementary school.

4 DEFINITIONS AND MEASUREMENT INSTRUMENTS

Hyperactivity and inattention symptoms in the children were assessed using the following nine items:

(1) Could not sit still, was restless or hyperactive; (2) Couldn't stop fidgeting; (3) Was impulsive, acted without thinking; (4) Had difficulty waiting for his/her turn in games; (5) Couldn't settle down to do anything for more than a few moments; (6) Was unable to wait when someone promised him/her something; (7) Was unable to concentrate, could not pay attention for long; (8) Was easily distracted, had trouble sticking to any activity; (9) Was inattentive.

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INTERVENTION PATHS

Given the persistence of hyperactivity or inattention symptoms over time and the fact that they were generally associated with more difficult life trajectories, early intervention would be important, as well as providing the child and his/her parents tools to foster his/her development. Parents seem to be in a position to detect these symptoms in their child at an early age. With regards to school, since the majority of students manifesting a high level of hyperactivity or inattention symptoms were in a regular class, it would be important to conduct a needs assessment prior to providing support to them and their teachers.

FACT SHEET 05 VICTIMIZATION AT ENTRY INTO ELEMENTARY SCHOOL

1 CONTEXT

Children who are victimized by their peers are sometimes chosen as victims based on characteristics that differentiate them from others. However, it seems that somewhat atypical social behaviours are the strongest predictors of victimization. Certain factors such as parenting practices or the sex of the victim can also be associated with the risk of victimization.

SOURCE

This fact sheet is a brief summary of the results presented in the following fascicle: GIGUÈRE, Claudine, Frank VITARO, Michel BOIVIN, Hélène DESROSIERS, Jean-François CARDIN and Mara R. BRENDGEN (2011). "Peer Victimization from Kindergarten to Grade 2," *Québec Longitudinal Study of Child Development (QLSCD 1998-2010) – From Birth to 8 Years of Age*, Institut de la statistique du Québec, Vol. 5, Fascicle 4. http://www.iamillbe.stat.gouv.qc.ca/pdf/publications/feuillelet/fascicule_victimisation_an.pdf

2 HIGHLIGHTS

Between kindergarten and Grade 2, 25% to 37% of children reported, according to the behaviour under study and the year of the survey round, having often been a victim of acts such as being called names, being pushed, hit, kicked or teased by their fellow students. However, the percentages observed each year does not necessarily mean this affected the same children.

Based on data collected from the children, the cohort could be categorized into three groups according to the acts of bullying which victimized them in kindergarten, Grade 1 and Grade 2:

- The first group comprised children who reported little or no victimization perpetrated by their peers during this period of their educational trajectory (37%).
- The second group was composed of children who were sometimes the target of many negative behaviours or often the target of certain negative behaviours on the part of their peers (53%).
- The third group comprised children who were constantly victims of bullying or aggression from kindergarten to Grade 2 (10%).

Certain children were more likely to belong in the second and third groups:

- Children presenting more behavioural problems such as physical aggression, hyperactivity or opposition.
- Children whose parents reported more negative interactions with them such as raising their voice, getting angry or using corporal punishment in reaction to a difficult behaviour.

Though the probability of constantly being a victim of bullying did not vary by sex, boys had a greater risk of being in the second group rather than the first.

Beginning in kindergarten, negative behaviours that are the basis of victimization, such as being called names or pushed around, were rather frequent.



2 HIGHLIGHTS (continued)

Association with attachment to the school

Even though the children presented a relatively high level of attachment to their school between kindergarten and Grade 2, those who were being constantly victimized seemed less attached at the beginning of their academic trajectory.

3 OF NOTE

The results obtained were based on the young children's self-assessment of victimization they experienced. It would be productive to confirm their reports using sources other than the children themselves.

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in the kit, visit our
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[www.iamillbe.
stat.gouv.qc.ca](http://www.iamillbe.stat.gouv.qc.ca)

INTERVENTION PATHS

These results underline the importance of early screening of children at risk for the purposes of prevention. Interventions made in kindergarten with children at risk and their parents, or even earlier if possible, could contribute to improving their personal and interpersonal skills. It is recommended that people working in various capacities in the education system continue to systematically discourage acts of bullying and clearly communicate this to children in school.

1 CONTEXT

Numerous factors – family, social, individual, pedagogical – were analyzed to explain academic performance in various subjects. Certain studies have shown that the more a student enjoys and feels competent in his/her subjects, the more he/she will succeed.

SOURCE

This fact sheet is a brief summary of the results presented in the following fascicle: GUAY, Frédéric and Denis TALBOT (2010). "Motivation in the First and Second Grades of Elementary School: An Analysis Based on Gender and Socioeconomic Status," in *Québec Longitudinal Study of Child Development (QLSCD 1998-2010) – From Birth to 8 Years of Age*, Institut de la statistique du Québec, Vol. 5, Fascicle 3. http://www.iamillbe.stat.gouv.qc.ca/pdf/publications/feuille/fascicule_motivation_an.pdf

Note that the QLSCD has been following a cohort of children who were born in Québec in 1997-1998.

2 HIGHLIGHTS

In Grades 1 and 2, children enjoyed reading and writing more than they did mathematics (intrinsic motivation). They also felt they had more competencies in reading comprehension or writing than in mathematics (academic self-concept), according to their grade level.

When we compare Grade 2 with Grade 1, we observe that:

- The pleasure children felt while learning mathematics significantly decreased, while there was no change in motivation in reading and writing.
- Children felt less competent in mathematics and writing.

In Grade 1, differences in motivation and the feeling of competency varied by the child's sex and socioeconomic status.

- In general, girls were more motivated than boys in reading and writing. They also reported feeling more competent in reading comprehension. However, they derived less pleasure from mathematics than boys and felt less competent than them in this subject.
- Children from families with a higher socioeconomic status were more motivated and felt more competent in reading comprehension. A similar trend was observed in writing.

In Grades 1 and 2 of elementary school, children enjoy reading and writing but seemed less motivated in mathematics.



3 DEFINITIONS AND MEASUREMENT INSTRUMENTS

Intrinsic motivation

Intrinsic motivation means that the source of motivation does not come from external sources, but rather from the pleasure and satisfaction a child feels when engaging in an activity.

Academic self-concept

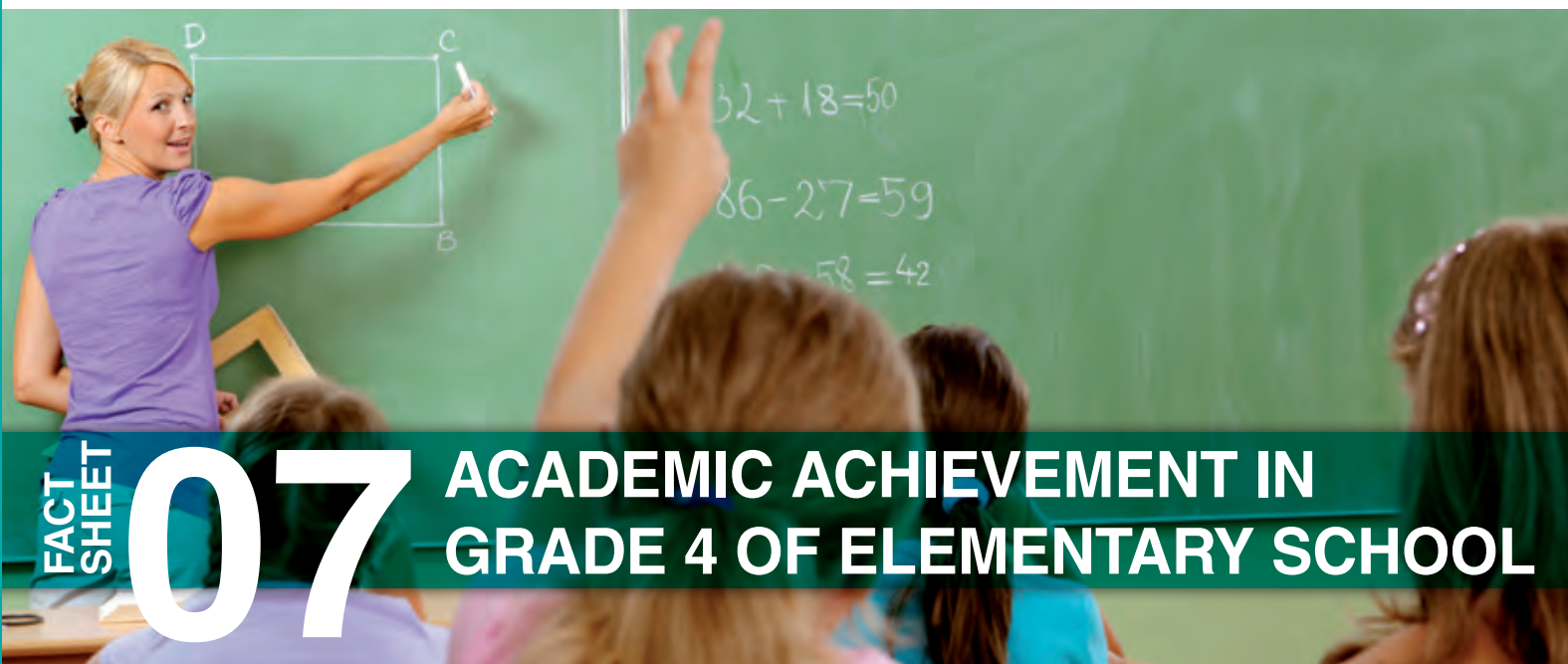
Academic self-concept is defined as the subjective evaluation a student makes of his/her skills in a given subject. For example, a student who tells himself he is capable of rapidly learning mathematics has a high academic self-concept in this subject.

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INTERVENTION PATHS

Interventions aimed at helping boys derive more pleasure from reading and writing and seeing themselves as competent in these subjects continue to be essential. Interventions with girls can target mathematics in this regard. It would also be important to help children from disadvantaged families so that they feel more competent in reading and derive more pleasure in this subject at school entry. Initiatives could target both teachers and parents.



FACT
SHEET

07 ACADEMIC ACHIEVEMENT IN GRADE 4 OF ELEMENTARY SCHOOL

1 CONTEXT

Children's school readiness implies an adequate level of preparation in terms of basic cognitive, physical, social and emotional skills. It also presupposes that they manifest a certain enthusiasm for learning. These aptitudes can play an important role in children's academic success.

SOURCE

This fact sheet is a brief summary of the results presented in the following fascicle: PAGANI, Linda S., Caroline FITZPATRICK, Luc BELLEAU and Michel JANOSZ (2011). "Predicting Academic Achievement in Fourth Grade from Kindergarten Cognitive, Behavioural and Motor Skills," *Québec Longitudinal Study of Child Development (QLSCD 1998-2010) – From Birth to 10 Years of Age*, Institut de la statistique du Québec, Vol. 6, Fascicle 1. http://www.iamillbe.stat.gouv.qc.ca/pdf/publications/feuille/fascicule_reussite_scol_an.pdf

2 HIGHLIGHTS

Beyond differences in academic achievement that can exist among children according to various individual or family characteristics, such as age, sex, or mother's educational level, certain skills in kindergarten can provide a means of predicting such achievement in Grade 4 of elementary school.

- Greater knowledge of numbers in kindergarten was associated with better academic performance in all subjects in Grade 4 and with greater classroom engagement and interest in school.
- A larger vocabulary was associated with better academic performance in all subjects.
- Fine motor skills, such as holding a pencil, were associated with better performance in reading and writing and with greater classroom engagement.
- Better movement skills (running, jumping, sliding, etc.) were associated with better performance in writing and greater classroom engagement.
- Hyperactivity behaviours in kindergarten were associated with lower academic performance in most subjects in Grade 4, lower classroom engagement and less interest in school.
- Better gross motor skills (coordination, overall physical development) were associated with lower interest in school.

Certain competencies of children in kindergarten not only predicted their academic performance, but also their level of school engagement and the importance they ascribed to school in Grade 4.



3 DEFINITIONS AND MEASUREMENT INSTRUMENTS

Academic achievement

Children's academic achievement in Grade 4 of elementary school was assessed through questionnaires administered to their teacher using the following indicators:

1. Academic performance in reading, writing, mathematics and science
2. Overall academic performance
3. Classroom engagement (focus on the task, respect for rules, perseverance, autonomy, etc.)
4. School engagement (importance ascribed to school by the child).

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INTERVENTION PATHS

The results suggest that it would be important in early childhood to not only emphasize vocabulary development, but also the basic operations of mathematics. They also reveal the importance of targeting hyperactive behaviours and the development of fine motor skills for interventions in the preschool years and kindergarten. Motor activities or athletics could contribute to arousing interest in school among more physically active children as they progress through the education system.

1 CONTEXT

A positive relationship between a student and his/her teacher can contribute to academic success. A warm and communicative relationship, particularly in the first few years of elementary school, has been associated with a number of indicators of long-term success in the education system, not only academic, but also social and emotional.

SOURCE

This fact sheet is a brief summary of the results presented in the following fascicle: DESROSIERS, Hélène, Christa JAPEL, Pooja R. P. SINGH and Karine TÉTREAU (2012). "Positive Teacher-Student Relationships: Associations with Child Characteristics and Academic Achievement in Elementary School," in *Québec Longitudinal Study of Child Development (QLSCD 1998-2010) – From Birth to 10 Years of Age*, Institut de la statistique du Québec, Vol. 6, Fascicle 2. http://www.jesuisjeserai.stat.gouv.qc.ca/pdf/publications/feuillelet/ELDEQ_fasc6no2_an.pdf

Note that the QLSCD has been following a cohort of children who were born in Québec in 1997-1998.

2 HIGHLIGHTS

Teachers' perceptions¹

Between 6 and 10 years of age, namely between kindergarten and Grade 4, the children progressively shared less information spontaneously with their teacher. The teacher also increasingly lacked the capacity to understand what the children were feeling during this period.

In general, teachers reported a less positive and warm relationships with the following:

- Boys
- Children from low-income households
- Children perceived as having more behavioural problems (hyperactivity, inattention, opposition, aggression, emotional difficulties, anxiety).

For example, proportionally fewer teachers reported that it was easy to understand how boys were feeling, and perceived themselves less confident and effective in their interactions with students who had behavioural problems.

Children's perceptions

The majority of children had a very favourable opinion of their relationship with their teacher, particularly at the ages of 7 and 8 years. However, their opinion was less positive at the age of 10 years when the majority of children were in Grade 4.

Whatever the child's age under study, boys and children with more behavioural problems such as hyperactivity, inattention, opposition or aggression were less likely to report that they liked their teacher. They also were less likely to report that they could talk to their teacher and that she would listen to them and respond to them in a pleasant manner.

From 18% to 25% of teachers of children 6, 7, 8 and 10 years of age reported they did not feel very confident and effective in their interactions with them.

1. Whatever the grade level under study, the vast majority of children had female teachers, so we have used the feminine gender to facilitate reading.



2 HIGHLIGHTS (continued)

Associations with academic performance

In Grades 1, 2 and 4 of elementary school, teachers reported having more positive and warmer relationships with children who had better academic performance. In contrast, it was only at the age of 10 years that a positive association was observed between students' assessment of their relationship with their teacher and their academic performance.

Beyond differences observed by family income or children's behavioural problems, the teachers' feeling of confidence and effectiveness, and to a lesser degree, their capacity for clearly understanding what the children were feeling, contributed to predicting the academic performance of children 10 years of age.

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3 OF NOTE

No data were available for Grade 3.

Assessing the teacher-student relationship was conducted with the teachers when the children were 6, 7, 8 and 10 years of age. However, it was only from the age of 7 years on that it was assessed with the students.

INTERVENTION PATHS

In light of the results, it would be important to establish or continue to implement support measures or professional interventions so that the teacher-student relationship can develop in a warm and positive manner throughout the academic trajectory of the children. Early intervention programs that promote behavioural and emotional self-regulation as well as social and cognitive skills in the children could also foster the development of positive relationships with teachers.

FACT SHEET 09 PARENT-SCHOOL RELATIONS AT THE ELEMENTARY LEVEL

1 CONTEXT

Parents' involvement in their child's school can not only foster academic success, but also his/her feeling of well-being, motivation, aspirations, and desire to stay in school, all the while having a positive impact on themselves and the child's teachers.

SOURCE

This fact sheet is a brief summary of the results presented in the following fascicle: NANHOU, Virginie, Hélène DESROSIERS and Luc BELLEAU (2013). "La collaboration parent-école au primaire: le point de vue des parents," (in French only), *Québec Longitudinal Study of Child Development (QLSCD 1998-2010) – From Birth to 12 Years of Age*, Institut de la statistique du Québec, Vol. 7, Fascicle 3 (in French only). <http://www.stat.gouv.qc.ca/statistiques/education/prescolaire-primaire/collaboration-parent-ecole.html>

Note that the QLSCD has been following a cohort of children who were born in Québec in 1997-1998.

2 HIGHLIGHTS

Mother-teacher relationship

In general, mothers reported that their relationship with their child's teacher was fairly positive throughout the grade levels under study (kindergarten, Grades 1, 2, 4, and 6).¹

Mother-teacher relations tended to be more positive among parents who had more involvement with their child's school or who reported that their school provided many opportunities to get involved in school activities.

Parents' involvement with their child's school

Parents' involvement varied with the type of activity and/or the age of the child.

- Whatever the age or grade level under study, communication with the child's teacher and a visit to the child's class were the most common school-related activities engaged in by the parents (90%).
- Between 50% and 70% of parents participated in a meeting at the school, according to the grade level. These were meetings with the principal or teacher, attending governing board or parents' committee meetings.
- Between 40% and 60% of parents had attended a school event in which their child had participated.
- A maximum of 10% of parents reported having helped out at the school, such as in the library or computer room, whatever the grade level under study.

The highest participation level of parents volunteering at school was observed in kindergarten, either in the classroom or on field trips (36%). The highest level of parents' involvement in fundraising was observed when the children were in Grade 1 (39%).

1. No data were available for Grades 3 and 5 of elementary school.

Nearly all parents had taken part in at least one activity at their child's school, even if their degree of involvement tended to decrease as the child advanced through the education system.



2 HIGHLIGHTS (continued)

Parents' participation in a large number of school activities, namely 5 or more in the same school year, was more frequent among families:

- With a higher socioeconomic status
- With both biological parents living in the household
- In which the mother had a university degree
- In which the mother was Canadian by birth (only in kindergarten, Grades 1 and 2)
- In which the parents felt welcomed by the school or who reported that the school provided many opportunities to get involved in school activities.

In Grades 1 and 2 of elementary school, the academic performance of children was more likely to be reported as "Very good" by the parents when the latter had participated in a large number of school activities.

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3 OF NOTE

The positive association observed between parents' participation in school activities and their child's academic performance could in part be the translation of the effect of certain characteristics of the parents most involved in the school, since these were also commonly associated with academic performance.

The decrease in parents' involvement in the school as their child progressed through the education system is not necessarily a sign of disengagement on their part. Parental engagement can also be manifested elsewhere than at the school, such as monitoring homework, discussing school-related matters with the child, giving encouragement, etc.

INTERVENTION PATHS

A welcoming, friendly school provides opportunities for parents to get involved by taking into consideration their constraints and the needs of the school. The administration and other personnel implement strategies to create or develop a relationship of trust between the parents and teachers as well as the school in general, particularly among parents less likely to get involved.

1 CONTEXT

Skills in reading comprehension, especially in the final years of elementary school, are essential to performing well in high school. In adulthood, good reading skills are associated with the employment rate, higher income and a better health status. Developing writing skills also constitutes an asset for future success.

SOURCE

This fact sheet is a brief summary of the results presented in the following fascicle: DESROSIERS, Hélène, and Karine TÊTREAU (2012). "Les facteurs liés à la réussite aux épreuves obligatoires de français en sixième année du primaire: un tour d'horizon," *Québec Longitudinal Study of Child Development (QLSCD 1998-2010) – From Birth to 10 Years of Age*, Institut de la statistique du Québec, Vol. 7, Fascicle 1 (in French only). <http://www.stat.gouv.qc.ca/statistiques/education/prescolaire-primaire/reussite-epreuve-francais.html>

Note that the QLSCD has been following a cohort of children who were born in Québec in 1997-1998.

2 HIGHLIGHTS

Among children in the regular stream and in Grade 6 of French elementary school:

- Three quarters (75%) passed the compulsory French language exam in reading, while 85% passed the compulsory French language exam in writing (marks 60% and higher);
- Nearly 9% failed both exams.

Approximately 20% of children had not mastered the basic spelling skills needed for high school, namely were at risk of cumulative delays and failure.

The passing rates in French were lower among boys compared to girls. Other factors related to child, family, school or neighbourhood characteristics were associated with passing the French language exams.

The passing rate in reading comprehension or writing was lower in children:

- From a family with low socioeconomic status.
- Living in a single-parent or step-parent household.
- With at least three brothers or sisters.
- Whose parents had lower educational aspirations for them.
- Whose parents ascribed less value to their academic performance.
- Who reported they were less close to their mother or father
- Whose health status was perceived as "Good" or "Fair" rather than "Excellent" or "Very good" by their parent.
- Who said they did not engage in physical activities during their leisure time.

Passing the compulsory exams in the French language was strongly associated with teachers' assessments of the children's performance in all subjects.



2 HIGHLIGHTS (continued)

- Who had more behavioural problems such as hyperactivity, inattention, physical aggression or opposition or who manifested more emotional problems or symptoms of anxiety, as reported by their teacher. Among these problems, those related to attention seemed to be the most determinant.
- Who were less attached to school or participated less in class, namely were less autonomous, cooperated less or who posed fewer questions when they did not understand.
- Who were less motivated to read or felt less competent in reading and/or writing.
- Whose academic aspirations were lower, in other words they envisaged obtaining a high school diploma or less.
- Who had a less positive relationship or one with more conflict with their teacher.
- Who attended a school in a neighbourhood considered disadvantaged.

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In both boys and girls, the time spent reading for pleasure was positively associated with passing the compulsory French reading comprehension exam. It was also associated with the writing exam among boys.

School readiness and the preschool experience

Passing the compulsory French exams in Grade 6 of French elementary school was also associated with certain characteristics prior to school entry. The passing rate was lower among children:

- Who were not read to by an adult daily around the age of 1½ years.
- Who were considered vulnerable in at least one domain or another of their development in kindergarten (see Fact Sheet 2), such as experiencing more cognitive, attention-related or social difficulties.

3 OF NOTE

Among the cognitive skills assessed in kindergarten, basic knowledge of mathematics such as counting up to 20 or recognizing geometric shapes were those that best predicted passing compulsory French exams at the end of elementary school.

Among children who failed the exams, approximately 40% had not received any of the three forms of non-parental assistance, namely help with homework at school, help from a tutor, or remedial instruction.

INTERVENTION PATHS

The results underline the importance of continuing efforts to instill interest in reading well before formal learning occurs at school. Ensuring children receive the support they need in overcoming learning difficulties in reading comprehension and writing, in particular those from low socioeconomic status families, would be important from kindergarten on. It would also be important to help children become autonomous readers by letting them choose materials that interest them, for example. It is essential that students be supported and helped in organizing the knowledge they are acquiring – the role of the teacher would be essential in this regard.

1 CONTEXT

Learning mathematical concepts and problem-solving helps children make informed decisions in various situations of daily life – hence the importance of developing skills in mathematics for academic, social and career success.

SOURCE

This fact sheet is a brief summary of the results presented in the following fascicle: TÊTREAU, Karine, and Hélène DESROSIERS (2013). “Les facteurs liés à la réussite à l’épreuve obligatoire de mathématique en sixième année du primaire : un tour d’horizon,” *Québec Longitudinal Study of Child Development (QLSCD 1998-2010) – From Birth to 12 Years of Age*, Institut de la statistique du Québec, Vol. 7, Fascicle 4 (in French only). http://www.stat.gouv.qc.ca/statistiques/education/prescolaire-primaire/epreuve_primaire.html

Note that the QLSCD has been following a cohort of children who were born in Québec in 1997-1998.

2 HIGHLIGHTS

Among children following the regular stream in school, 78% passed the compulsory mathematics exam in Grade 6 of elementary school (with a mark of 60% or higher).

The passing rate showed no difference by sex. However, many factors related to the child or his/her family, school or neighbourhood were associated with performance in the mathematics exam.

The passing rate was lower among children:

- From a family with low socioeconomic status.
- Whose parents had lower educational aspirations for them or ascribed less importance to their academic performance.
- Who reported being less close to their father, and to a lesser degree, their mother.
- Who, according to their teacher, have more behavioural problems such as hyperactivity, inattention, physical aggression or opposition, or who present more symptoms of anxiety or emotional problems. Among these, problems related to attention seemed to be the most determinant.
- Who manifested a lower level of participation in class, namely were less autonomous, cooperated less or posed fewer questions when they did not understand something.
- Who were less motivated in mathematics or who felt less competent in this subject.
- Whose academic aspirations were lower, namely they envisaged obtaining a high school diploma or less.
- Who attended a school in a neighbourhood considered to be disadvantaged.
- Who were living in a rural area or a town of fewer than 10,000 inhabitants.

Passing the compulsory mathematics exam in Grade 6 was positively associated with the teachers' assessment of the children's performance in other subjects (reading, writing, science and overall academic performance).



2 HIGHLIGHTS (continued)

In addition, irrespective of their socioeconomic status, students who spent less than an hour or six hours or more on the internet, excluding activities related to school, were less likely to have passed the math exam than those who spent between one and five hours on the internet.

Among boys, the time spent reading for pleasure was positively associated with the passing rate of the mathematics exam. Moreover, children whose parents considered them to be in better physical condition than other children of the same age and sex presented a higher passing rate.

School readiness and the preschool years

Passing the compulsory mathematics exam in Grade 6 was also strongly associated with certain characteristics prior to school entry. The passing rate was lower among children:

- Who were not read to by an adult daily around the age of 1½ years.
- Who leafed through books on their own initiative only once a week or less around the age of 2½ years
- Who watched television more than an hour a day around the age of 2½ years
- Who were considered vulnerable in at least one domain of development in kindergarten (see Fact Sheet 2). Examples are children who had more cognitive, motor, attention or class engagement problems.

Among the cognitive skills assessed in kindergarten, basic knowledge of mathematics such as counting up to 20 or recognizing geometric shapes were those that best predicted passing the math exam in Grade 6.

3 OF NOTE

Children in Grade 6 of elementary school who felt more competent in reading comprehension than their peers had a higher passing rate, not only in the compulsory French exams (see Fact Sheet 10), but also the compulsory math exam.

Half of the students who did not pass the mathematics exam had not received any of the three forms of non-parental assistance, namely help with homework at school, help from a tutor, or remedial instruction.

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INTERVENTION PATHS

In addition to fostering parents' engagement in reading activities with their child, it would be important to instill basic concepts of mathematics in the preschool years. Parent's involvement in their child's life at school throughout his/her academic trajectory should also be encouraged and supported. Interventions could also focus on improving children's engagement in class and capacity for attention from the very beginning of their years in school.

FACT SHEET 12 INTRODUCTION TO SMOKING, ALCOHOL AND DRUGS

1 CONTEXT

Numerous studies have indicated that the introduction to psychoactive substances such as tobacco, alcohol and cannabis at an early age can foster usage and consumption, and indeed addiction in adulthood, and lead to behaviours putting one's health at risk. Such substances can affect motivation and academic performance, and lead to dropping out of school.

SOURCE

This fact sheet is a brief summary of the results presented in the following article: NANHOU, Virginie, Amélie DUCHARME and Hadi Eid (2013). "L'initiation au tabac, à l'alcool et aux drogues: un aperçu de la situation lors du passage de la 6^e année du primaire à la 1^{re} année du secondaire," *Profiles and Pathways. Québec Longitudinal Study of Child Development – QLSCD Series*, Institut de la statistique du Québec, No. 16, February, (in French only).
<http://www.stat.gouv.qc.ca/statistiques/sante/bulletins/portrait-201302.pdf>

Note that the QLSCD has been following a cohort of children who were born in Québec in 1997-1998.

2 HIGHLIGHTS

In Secondary 1 in 2011, 12% of the students had already tried smoking cigarettes, 25% had tried alcohol, and 3.5% drugs.¹

The transition from elementary to high school marked a significant increase in the proportion of adolescents who had already engaged in these behaviours. Two thirds of the students who had already tried smoking and had already consumed alcohol and 90% of students who had already tried drugs had done so in their first year of high school.

Among the students in Secondary 1 who had already consumed alcohol in their lifetime, 40% reported having drunk five or more standard drinks on the same occasion (i.e. drinking to excess) in the 12 months preceding the round of data collection. They comprised 10% of the entire cohort.

Among students in their first year of high school who had already tried drugs in their lifetime:

- The main drug of choice was cannabis
- Nearly 90% had used drugs in the 12 months preceding the round of data collection
- Approximately 50% had used drugs more than once in the aforementioned period of time.

The introduction to smoking, alcohol consumption and drug use comprised behaviours associated with one another. High school students who had already tried smoking were proportionally more likely to consume alcohol or use drugs, or to consume alcohol to excess.

1. This percentage is not as precise as the others because of the small numbers of students in this category.



2 HIGHLIGHTS (continued)

Secondary 1 students most likely to have tried smoking or drinking alcohol in their lifetime:

- Were male
- Were from a low socioeconomic status household
- Were not living in a household with both biological parents
- Were exposed to second-hand smoke at home (with regards to having tried smoking)
- Showed little attachment to school
- Had low educational aspirations
- Had lower marks in their main language class and in mathematics.

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3 OF NOTE

The results cover children born in Québec having followed the regular stream in school, namely they were in Grade 6 of elementary school in 2010, and in Secondary 1 of high school in 2011.

INTERVENTION PATHS

At the very beginning of adolescence, children are fairly vulnerable, so it would be recommended to conduct interventions targeting potential risk behaviours. Given the association between smoking, alcohol and drugs, developing prevention programs for students in the first year of high school (Secondary 1) addressing all of these simultaneously would seem to be particularly important.

FACT SHEET 13 ELEMENTARY SCHOOL STUDENTS AT RISK OF DROPPING OUT OF HIGH SCHOOL

1 CONTEXT

Although research conducted in Québec and elsewhere has revealed that students who drop out of school have certain risk factors in common, they are not all the same in terms of psychosocial and academic characteristics. Indeed, it seems that students who drop out can be differentiated by whether or not they present behavioural problems, in addition to academic ones.

SOURCE

This fact sheet is a brief summary of the results presented in the following fascicle: JANOSZ, Michel, Sophie PASCAL, Luc BELLEAU, Isabelle ARCHAMBAULT, Sophie PARENT and Linda PAGANI (2013). "Elementary School Students at Risk of Dropping Out of High School: Characteristics at 12 Years of Age and Predictors at 7 Years of Age," *Québec Longitudinal Study of Child Development (QLSCD 1998-2010) – From Birth to 12 Years of Age*, Institut de la statistique du Québec, Vol. 7, Fascicle 2. http://www.stat.gouv.qc.ca/statistiques/education/frequentation-scolaire/decrochage_an.pdf

Note that the QLSCD has been following a cohort of children who were born in Québec in 1997-1998.

2 HIGHLIGHTS

In analyzing the three main predictors of school dropout, namely low performance, delays and a low level of school engagement, 15% of 12-year-old students already presented a serious risk of dropping out later in high school. Among these, nearly half presented discipline problems in class, in addition to those related to academic performance or engagement.

Though there was no significant difference between boys and girls among children at risk with no discipline problems, proportionally more boys than girls were in the group of children at risk with discipline problems.

The main characteristics of children at 7 years of age and 12 years of age at risk of dropping out of high school

Whether or not the children had discipline problems, five main characteristics differentiated 12-year-old children at risk of dropping out of high school from those who presented no risk:

- A more negative academic self-concept in reading
- A more negative academic self-concept in mathematics
- Attention problems
- A lower level of altruism
- A greater need for parental help with school work.

A large number of problems observed among children 12 years of age at risk of dropping out of high school were already present when they were 7 years of age. This was especially the case in terms of a more negative academic self-concept in reading and inattention.

In general, difficulty in reading at 7 years of age was the main sign of risk at the end of kindergarten of dropping out of high school later on.

School dropout is a process which for many children begins at school entry. Already when their child is 7 years of age, parents of children at risk are often called to the school to discuss their child's poor academic performance, and have greater difficulty in creating the conditions that foster learning.

2 HIGHLIGHTS (continued)

Children with discipline problems at risk of dropping out compared to those not at risk

In addition to the characteristics listed above, these students presented specific traits compared to students not at risk. They came from households in which:

- Parenting practices were less positive, namely where the parents spent less time encouraging their child, speaking with or engaging in activities with him/her (at 12 years of age).
- Parents were dissatisfied with helping their child with his/her homework (at 12 years of age).
- Family income was lower (at 7 and 12 years of age).
- There was less stimulation for reading on the part of the parents (at 7 years of age).

Already at 7 years of age, children at risk with discipline problems tended to present a lower quality of participation in class than those not at risk of dropping out later in high school.

Children with no discipline problems at risk of dropping out compared to those not at risk

In addition to characteristics already listed which distinguish them from students not at risk, they mainly presented interiorization of their problems:

- Less indirect aggression and more symptoms of anxiety (at 12 years of age)
- Fewer signs of hyperactivity (at 12 years of age).

They also were more likely to come from households in which:

- Parents ascribed less importance to academic performance (at 12 years of age)
- Mothers were more likely to present symptoms associated with restless legs syndrome (uncontrollable need to move their legs), which was associated with attention deficit in the child (at 7 years of age).

Children with no discipline problems at risk of dropping out compared to those at risk with discipline problems

Many characteristics differentiated the two groups at risk. For example, children with discipline problems at risk of dropping out had less interest in school and were more likely to be in a class with other children with discipline problems (at 12 years of age). Children with no discipline problems at risk of dropping out presented lower scores in a knowledge-of-numbers activity at 7 years of age and were more likely to receive special needs help at 12 years of age.

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3 OF NOTE

Analyses resulting in elementary school students being categorized as at risk of dropping out of school later were based on an index initially validated for high school students. The capacity of this index to predict school dropout could be verified when the data on the children's high school trajectory become available.

4 DEFINITIONS AND MEASUREMENT INSTRUMENTS

Academic self-concept

Academic self-concept is defined as the subjective evaluation a student makes of his/her skills in a given subject. For example, a student who tells himself he is capable of rapidly learning mathematics has a high academic self-concept in this subject.

INTERVENTION PATHS

The results underline the importance of a number of intervention targets, notably instilling an interest in reading and improving reading comprehension skills at school entry, providing support to parents in their child-rearing practices, and improving children's attention skills, feeling of self-efficacy, social skills, and emotional self-regulation.