

***Abbreviated Report on Children's Profile  
at School Entry  
2008-2009***

EVALUATION OF THE  
***'PREPARING FOR LIFE'***  
EARLY CHILDHOOD  
INTERVENTION PROGRAMME

By  
**UCD GEARY INSTITUTE**  
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The full version of the report, discussing each section in detail, is available upon request or may be downloaded from <http://geary.ucd.ie/preparingforlife/>.



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Noel Kelly,  
Manager, Preparing for Life.

## **Executive Summary**

The Children's Profile at School Entry (CPSE) was conducted by the UCD Geary Institute who have been commissioned by the Northside Partnership to assess the levels of school readiness in a designated disadvantaged community of Ireland, as part of an overall evaluation of the *Preparing for Life (PFL)* early childhood intervention programme.

### ***Purpose and Description of the CPSE***

The CPSE is an annual representative survey of the levels of school readiness of junior infant children attending the local primary schools in the *PFL* catchment area. These surveys will 1) indicate the general level of school readiness for the older cohorts of children in the *PFL* area, 2) indicate whether the *PFL* programme is generating positive externalities, and 3) will serve as a baseline for the *PFL* cohort.

### ***CPSE Method***

The CPSE survey was conducted between October and December of 2008. Data were collected via online questionnaires completed by teachers and paper and pen questionnaires completed by parents. The teachers' and parents' response rate was 99% and 76%, respectively. This resulted in a CPSE sample of 101 children across five schools.

Pupil school readiness was assessed using teacher and parent reports on the Short Early Development Instrument (S-EDI; Janus, Duku, & Stat, 2005). The S-EDI is composed of 48 core items and provides scores across five domains of school readiness (physical health and well-being, social competence, emotional maturity, language and cognitive development, and communication and general knowledge). The S-EDI has normative data that correspond to each domain, allowing comparisons with a representative Canadian sample. It is important to note that this report presents the first Irish data related to the EDI, therefore EDI comparisons are made with a normative Canadian sample. Given potential social, economic, and cultural differences between not only Ireland and Canada, but also disadvantaged and non disadvantaged populations, parents and teachers also completed an additional set of questions on child behaviour to facilitate comparisons with a national Irish sample.

### **Results:**

#### ***School Readiness in the 2008-2009 CPSE Cohort***

- Teachers rated children in the CPSE cohort as displaying significantly *lower* levels of school readiness than a Canadian norm.
- Parents rated children as displaying significantly *higher* levels of school readiness than a Canadian norm.
- Children were rated highest on physical health and well-being and social competence, while they were rated lowest on the communication and general knowledge scale by teachers and were rated lowest on the language and cognitive development scale by parents. Please see Figure 1 below.

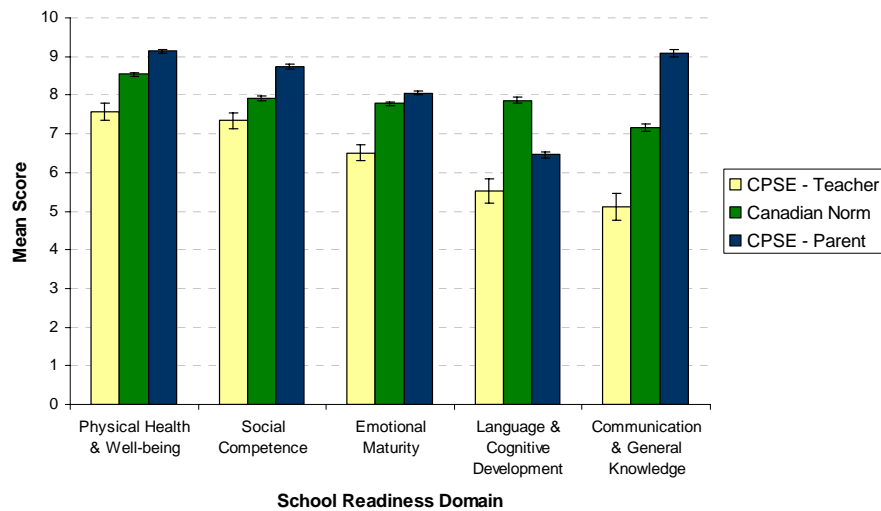


Figure 1. CPSE teacher, parent and youngest subset of Canadian norm means for each S-EDI domain.

- Approximately 50% of children in the CPSE cohort are performing *above* the norm in terms of physical health and well-being and social competence.
- Approximately 70% of children were rated *below* the Canadian norm on the emotional maturity, language and cognitive development, and communication and general knowledge domains, demonstrating specific areas of weakness for a large portion of the CPSE cohort.
- One-fifth of children scored in the lowest 10% of the cohort on one of the five S-EDI domains and a further 11% scored low on two domains, with only 5% scoring low on three or more domains.
- Differences in parental and teacher reports were replicated for the additional behavioural domains.
- Teachers rate the CPSE children as displaying more behavioural difficulties, in terms of hyperactivity/inattention and anxiety, than parents.
- In a comparison with a representative sample of Irish children from the *Lifeways Cross Generational Cohort Study*, teacher reports of child behaviour demonstrate that the CPSE sample are more aggressive, oppositional, hyperactive, anxious, and less prosocial.
- Comparing sub-samples based on low parental education from the *Lifeways* and CPSE data reveal that the CPSE sub-sample are significantly less aggressive and anxious, yet more hyperactive/inattentive.



### ***Group Differences in School Readiness***

The report also investigates differences in scores across a range of socio-demographic, parental, and environmental factors.

- Girls were reported to be more emotionally mature, more prosocial, and less aggressive than boys.
- Children with no siblings were rated as being more socially competent and less oppositional compared to children with at least one sibling.
- No significant differences emerged by parental relationship status or age.
- Children of parents with very low levels of education were rated as being less socially competent and emotionally mature, and more aggressive, oppositional, and hyperactive/inattentive than children of parents with higher education levels.
- Children of employed mothers were rated as being more socially competent and exhibited fewer oppositional/defiant behaviours.
- Children of families in receipt of social welfare were rated as being less socially competent, less emotionally mature, more oppositional/defiant, and more hyperactive/inattentive than children in families not in receipt of social welfare.
- Children who spent time in centre-based childcare prior to school entry were rated higher across all domains of school readiness than children who did not experience any centre-based childcare. Note however that the majority of children (82%) in the sample had experienced some form of centre-based childcare.

### ***Parenting and School Readiness***

Several relationships were identified between parenting and parent reported school readiness, highlighting the important role parents can play in getting their children ready for school.

- Authoritative parenting behaviours were positively correlated with school readiness in children.
- Authoritarian and permissive parenting behaviours were negatively correlated with school readiness in the cohort.

### ***Conclusion***

Based on teacher assessments of school readiness, this report indicates that children in the *PFL* catchment areas are not performing to the level of other children at school entry, a finding that provides quantitative evidence of the need for the *PFL* intervention. However, it is important to note that there is heterogeneity within the sample, with sub-groups of children performing above the norm. This initial report (2008-2009 academic year) presents the results on the first of a series of CPSE surveys which will be conducted annually over the next four years. The report will be amended each year to include the results of each new data collection wave, in addition to comparisons examining annual changes in levels of school readiness. Finally, please note that the CPSE survey was conducted with a sample of ~100 Junior Infant children living in a disadvantaged urban area of Ireland, therefore these results should not be generalised to the wider population.



## **I. Introduction**

### **A. Background & Aims**

The Children's Profile at School Entry (CPSE) was conducted by the UCD Geary Institute who have been commissioned by the Northside Partnership to assess the levels of school readiness in a designated disadvantaged community of Ireland as part of an overall evaluation of the *Preparing for Life (PFL)* early childhood intervention programme.

In 2004, a school readiness survey was conducted by the Children's Research Centre in Trinity College Dublin (Kiernan et al., 2008) in the *PFL* catchment area in which teachers reported that only 46% of children were 'definitely ready' for school. As a result, the *PFL* programme was developed with the aim of increasing the levels of school readiness in these disadvantaged areas.

*PFL* is a 5-year school readiness intervention starting in pregnancy and lasting until the children start school. The programme is jointly funded by Atlantic Philanthropies and the Office of the Minister for Children and Youth Affairs. The aim of the programme is to work with families from pregnancy onwards to help and support the healthy development of the child. All programme families receive facilitated access to enhanced pre-school and public health information, in addition to the services of a support worker. Half of these families are randomly allocated to receive enhanced supports including participation in a home-visiting mentoring programme and a group parent training programme. This experimental programme is one of the first of its kind in Ireland and aims to provide real time evidence on best practice in early intervention.

The CPSE is an annual representative survey of the levels of school readiness of junior infants children attending the local primary schools in the *PFL* catchment area. Specifically, the survey focuses on the children's levels of school readiness in the year they started school, and will:

- 1) Indicate the general level of school readiness for the older cohorts of children in the *PFL* area.
- 2) Indicate whether the *PFL* programme is generating positive externalities i.e., whether the public health style messages and improved service integration by the local providers translate into improving levels of school readiness.
- 3) Serve as a baseline measure of school readiness for the *PFL* cohort.

### **B. Overview of Report**

This abbreviated version of the report describes the first annual CPSE survey conducted in 2008. The report will be amended throughout the next 4 years to include the results of subsequent data collection waves, in addition to comparisons examining annual changes in levels of school readiness. The report is organised as follows:

- Section II provides a brief description of school readiness.
- Section III discusses the methodology employed.
- Section IV presents the results of the analysis.
- Section V summarises and concludes the report.

## **II. What is School Readiness?**

### **A. Definition of School Readiness**

School readiness is a multi-dimensional concept which reflects the holistic nature of children's development and takes account of a host of factors in their wider environment. While the traditional definition of school readiness focused on academic ability alone, more recent research on child development and early education has noted that school readiness is a multi-faceted concept which also includes physical health and well-being and motor development, social and emotional development, approaches to learning, language development, and emergent literacy (Child Trends, 2001; Kagan, Moore, & Bradenkamp, 1995). Together, these developmental domains have the capacity to influence the child's readiness for school and future academic achievement, as children who begin school with the appropriate cognitive and social skills maintain this advantage throughout the school years.

### **B. Determinants of School Readiness**

International research has identified several factors that influence a child's readiness for school. The key factors include child health, family factors, emergent literacy practices, early childhood care and education, school transitional practices, community and neighbourhood effects and media effects (Halle, Zaff, Calkins, & Geyelin-Margie, 2000).

### **C. Importance of School Readiness**

School readiness is important across a wide range of areas. Each dimension of school readiness can have consequences for a child's social, physical and educational outcomes. In particular, developmental problems in childhood are associated with negative life outcomes in adulthood. Poor school readiness has been linked to later academic failure (Raver, 2003), poor socio-emotional adjustment (Arnold et al., 1999; Hinshaw, 1992), and poor life outcomes such as unemployment (Ross & Shillington, 1990) and teenage pregnancy (Brooks-Gunn, 2003). School readiness has been described as a foundation on which all later learning is built and it has been argued that children who develop well at earlier stages and are ready to start school are in a position to elicit interactions and experiences that accelerate their subsequent development and facilitate their achievement (Heckman, 2000).

For more information on the definition, determinants and importance of school readiness please refer to the full report located on the *PFL* Evaluation website (<http://geary.ucd.ie/preparingforlife/>).

### **III. Methodology**

#### **A. Participants**

##### **1. Survey Design and Piloting**

In order to assess the level of school readiness in the *PFL* catchment area, a cross-sectional design was developed which collects information via surveys completed by the teachers and parents of junior infant children. Data for Wave 1 of the CPSE were collected during October/November/December of the 2008-2009 academic year. All survey instruments were piloted prior to administering the surveys to the study population.

##### **2. Eligibility**

All teachers and parents of junior infant children either residing in or attending schools in the *PFL* catchment areas were eligible for participation in the study. Parents had to give consent to complete the questionnaire themselves and also for their child's teacher to complete the questionnaire. While the study is interested in gaining an index of school readiness for children who reside in the *PFL* catchment area, parents of children who do not reside in the area themselves but were attending schools in the area, were also asked to participate to ensure no one child was excluded or singled out in the classroom.

##### **3. Response Rates**

There were a total of 123 eligible pupils across 5 schools. In total, 94 parent questionnaires were received resulting in a response rate of 76%. In total, 101 teacher questionnaires were completed, capturing data for 82% of eligible participants. Teacher questionnaires were completed for all pupils with parental consent, bar one, resulting in a teacher response rate of 99%.

#### **B. Instruments:**

Standardised coefficient reliability estimates (Cronbach, 1951) for all measures used in the CPSE survey are reported in the full report which can be located on the *PFL* Evaluation website (<http://geary.ucd.ie/preparingforlife/>).

##### **1. Teacher Questionnaire**

The teacher questionnaire was administered using an online survey with the teachers accessing a secure website using a unique user ID and password. The questionnaire took approximately 10 minutes to complete for each child and contained the following instruments:

###### **a) Teacher Demographics**

Teachers were asked a number of demographic questions including their age, qualifications, how long they have been teaching in general, how long they have been teaching at this particular school, and how long they have taught junior infant classes.

## **b) Short Early Development Instrument**

The core measure of school readiness in the teacher questionnaire was a short form of the Early Development Instrument (EDI; Janus & Offord, 2000) which was developed at the Offord Centre of Child Studies (OCCS), McMaster University (Hamilton, Ontario, Canada), with the specific purpose of meeting the needs implied by the paradigm shift in school readiness research in which a more holistic definition of school readiness was adopted. The EDI is used regularly across Canada and has been used in many countries including America, Chile, Kosovo, Holland, New Zealand, and Jamaica.

The OCCS has established normative data for the EDI in order to set a representative benchmark for comparison of data from projects using the instrument. Research comparing the predictive capability of the EDI with direct school readiness assessments has shown that the EDI predicts school achievement in early childhood as accurately as direct assessments of school readiness (Fantuzzo, Bulotsky-Shearer, Fusco, & McWayne, 2005).

The short form EDI (S-EDI; Janus et al., 2005) was developed by the OCCS by conducting a factor analysis of the 104 items on the long version of the EDI. The S-EDI is composed of 48 core items and provides scores in five domains of school readiness: *physical health and well-being, social competence, emotional maturity, language and cognitive development, and communication and general knowledge*. Samples items from this measure are reported in Table 1 of Appendix A.

Teacher-rated S-EDI domains that reached reliability of .68 or above are included in further analyses.

## **c) Additional Behavioural Domains**

In addition to the core measure of school readiness (i.e., S-EDI), 18 additional items were included in the teacher questionnaire to assess several further components of school readiness. These additional items measure school readiness as characterised by the following five behavioural domains: *aggressive behaviour, oppositional/defiant behaviour, hyperactivity/inattention, anxiety, and prosocial behaviour*. Examples of these items are presented in Table 2 of Appendix A.

These items were included as they are present in the 5-year old follow-up of the Irish *Lifeways Cross-Generation Cohort Study* which was conducted in 2007.<sup>1</sup> As there are no comparable data

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<sup>1</sup> *The Lifeways Cross Generational Cohort Study* is a cross-generation cohort study comprising three generations of the same family. Its goal is to identify opportunities for development, change and improvement in the healthcare and well-being of the Irish population. The aim of this cohort study is a) to record physical and psychological health status and socio-economic circumstances in individuals at birth, during childhood, early childhood and early middle age in Ireland, b) to follow such individuals prospectively in order to measure their changing health status, c) and assess the extent to which that relates to their social circumstances. Between October 2001 and Jan 2003, 1124 pregnant women were recruited in the ante-natal clinics of the Coombe Hospital Dublin and University College Hospital, Galway. 1088 babies were born to 1076 mothers. Fathers (n=331), maternal grandparents and paternal grandparents (n=1231) were subsequently recruited. The study is now comprised of 520 three-generation families. Data includes; baseline lifestyle information on mothers, fathers and grandparents; electronic mother and child ante-natal/birth hospital records; grandparent examination and biological data; patient-held records for a sub-sample of

on the S-EDI available in Ireland, including these additional items enables a comparison between the CPSE cohort and a representative sample of Irish children on several dimensions related to school readiness.

All teacher-rated domains that reached reliability of .70 are included in further analyses.

## **2. Parent Questionnaire**

Parents were recruited via their child's teacher. The paper and pen questionnaire took approximately 30 minutes for the parent to complete. The questionnaire consisting of the following instruments:

### **a) Parent and Family Demographics**

Socio-demographic information related to family composition, parental age, ethnicity, parental employment and education, family income, social welfare status, and childcare was included in this questionnaire.

### **b) Short Early Development Instrument**

The core measure of school readiness in the parent questionnaire was the short form of the Early Development Instrument (S-EDI, Janus, Duku, & Stat, 2005) described above. Items were adapted to be answered by parents and assessed the parents' ratings of their child's *physical health and well-being, social competence, emotional maturity, language and cognitive development, and communication and general knowledge.*

### **c) Additional Behavioural Domains**

As in the teacher questionnaire, 18 items comprising several additional behavioural domains related to school readiness also were included in the parent questionnaire to facilitate comparisons with an Irish sample. These items measured *aggressive behaviour, oppositional/defiant behaviour, hyperactivity/inattention, anxiety, and prosocial behaviour.*

### **d) Parenting Styles and Dimensions Questionnaire**

(PSDQ; Robinson, Mandleco, Olsen & Hart, 2001)

This 32 item self report measure of parenting examines how often a parent displays certain behaviours toward his/her child yielding scores related to the traditional Baumrind (1966; 1967; 1971) parenting styles. The measure yields three constructs regarding parent's average use of *authoritative parenting, authoritarian parenting, and permissive parenting* behaviours. Examples of these items are presented in Table 3 of Appendix A.

Parent-rated domains that reached reliability of .63 or above were included in further analyses. Therefore, the non-reasoning/punitive subdomain of the authoritarian domain was excluded from further analyses due to the low reliability of this subscale.

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children; general practice follow-up data and immunisation records of all infants/children. This cohort has been followed for five years to date.

## C. Testing Procedures

Classical hypothesis tests such as the t-test, f-test, and chi-square tests can be unreliable when the sample size is small. Therefore, as the CPSE study is working with a relatively small sample (<100 observations), Monte Carlo permutation tests were used throughout to test whether the observed differences in S-EDI scores within the variables of interest e.g., gender (male/female), education (high/low) etc., are statistically significant. Monte Carlo permutation based inference tests, based on 20,000 replications, are used throughout the remainder of the report to test for group differences in school readiness scores.

## IV. Results

### A. CPSE Cohort Descriptives<sup>2</sup>

#### 1. Teacher Characteristics

In total, 12 teachers from five different schools completed the online questionnaire for students in their class who had parental consent. On average, the teachers are 37 years old and have been teaching for approximately 11 years. The average duration spent teaching Junior Infants is just over 4 years. The amount of time spent teaching in the current schools ranges from one year to 31 years, with an average of approximately 9 years. In terms of education, just over 58% of the teachers have a Postgraduate qualification and one-third have a Primary degree. All participating teachers are female. There is information on class size for 58% (n=7) of the teachers, with class sizes ranging from 13 to 16 students, and on average there are 14.7 (SD = 1.30) students in these classes<sup>3</sup>.

#### 2. Parent Characteristics

In total, 94 respondents completed the CPSE pen and paper questionnaire assessing family socio-demographics, work life and finances, parenting styles and behaviours, and the school readiness of their junior infant child. The majority (94%, n=87) of respondents are the child's biological mother. The average age of respondents is approximately 30 years old and the majority are Irish (88%, n=81), with 9.78% (n=9) being Irish Travellers. This corresponds to the 2006 Census data for the PFL catchment area which report that approximately 10% of the population in this area are Travellers.

#### 3. Child & Household Characteristics

The average age of children in the 2008-2009 CPSE cohort is 4.77 (SD = 0.39) years old and 59% (n=55) are male. On average, just under 5 people are living in each household and parents have just under 3 biological children.

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<sup>2</sup> Tables 1 and 2 reporting the full descriptive statistics (mean, standard deviation, minimum and maximum values, and frequencies of categorical variables) for the variables reported in this section can be found in the Appendix B.

<sup>3</sup> SD = standard deviation.



### **a) Total Household Weekly Income**

Sixty percent (n=56) of respondents provided information on their household weekly income, which includes income from all sources, social benefits, wages, salaries, dividends and interest, unemployment insurance, the dole, worker's compensation, government pension, child benefit, and child support for every member of the household. Fifty-five percent of the sample earn between €200-500 per week, with the largest category being those that take home between €300-400 per week (20%, n=11).

### **b) Medical Card, GP Visit Card, Health Insurance**

Three quarters (75%, n=66) of respondents are in possession of a medical card, 12% (n=9) are in possession of a GP Visit Card, and 5% (n=4) of respondents have private health insurance.

## **B. School Readiness in the 2008-2009 CPSE Cohort<sup>4</sup>**

For each domain of the S-EDI and for each behavioural domain, ratings are converted to a scaled score ranging from zero to ten. Higher scores indicate higher levels of that specific domain.

### **1. S-EDI**

Teacher and parent report of S-EDI domains for the CPSE sample are presented in Figure 2 along with a comparison to Canadian norms. Note that the error bars on each bar in Figure 2 represent the amount of error in that measurement. Error bars can be used to visually evaluate differences between two values. Specifically, if the error bars for two values do not overlap, it is a good indication that these two values are statistically difference from each other. For more exact measures of significance, however, please refer to the reported test statistics and *p* values in Table 1 of Appendix C.

#### **a) Teacher Reported S-EDI**

Teachers rated children in the 2008-2009 CPSE cohort highest on the physical health and well-being and social competence domains and lowest on the communication and general knowledge domain. Children's scores on each teacher reported S-EDI domain were generally all statistically significantly different from each other with two exceptions. First, differences between teacher rated physical health and well-being domain and teacher rated social competence domain did not reach significance and second, differences between the teacher rated language and cognitive development and communication and general knowledge domains did not reach significance.

#### **b) Parent Reported S-EDI**

Parents rated children highest in the domains of physical health and well-being and communication and general knowledge and lowest on the language and cognitive development

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<sup>4</sup> Results of the statistical analyses of significant or trend level (i.e., *p* < .10) results described in this section are reported in Tables 1-6 of Appendix C.

domain. Children's scores on each parent rated S-EDI domain were significantly different from each other, with the exception that the differences between parent rated physical health and well-being and communication and general knowledge domain did not reach significance.

### **c) Comparisons of Teacher and Parent Reported S-EDI**

Parents consistently rated their children as displaying higher levels of school readiness compared to teachers. Specifically, parent ratings were significantly higher than teacher ratings on the S-EDI domains of physical health and well-being, social competence, emotional maturity, and communication and general knowledge. Trends in the data reveal potential differences between parent and teacher reports of language and cognitive development. Note that the parent and teacher reports of certain domains of school readiness follow similar patterns. For example, both teachers and parents rated children highest on the physical health and well-being domain. In contrast, parents rated children high on the communication and general knowledge domain, a domain that was rated low by teachers.

### **d) Comparisons of CPSE S-EDI and Canadian Norms**

Teacher and parent ratings on each domain of the S-EDI were compared with the ratings of the youngest subset of pupils from the teacher reported Canadian norm sample which includes children ranging in age from 4 years, 11 months to 5 years and 1 month.

As illustrated in Figure 2, teacher rated school readiness of the CPSE cohort was consistently and significantly below both the Canadian norms and CPSE parent ratings on each S-EDI domain. Parent rated school readiness was significantly higher than the Canadian norms on the S-EDI domains of physical health and well-being, social competence, and communication and general knowledge. Conversely, parent rated language and cognitive development were significantly lower than the Canadian norm. Differences between parent rated emotional maturity and the Canadian norms did not reach significance.

Several similarities in the patterns of mean scores were present across parent, teacher, and norm reports. Specifically, all reporters showed the same pattern in ratings for the physical health and well-being, social competence and emotional maturity domains, with scores decreasing across each one, and the mean scores across all three samples being highest in the physical health and well-being domain. The communication and general knowledge domain received the lowest rating by the teacher report and the norm report, yet was rated as highest by parents.

In sum, although all raters were consistent in regards the domains that were rated the highest and lowest, such that both parents and teachers rated the physical health and well-being domain as one in which the children performed well, the level at which children are performing varied significantly across reporters. Specifically, parents rated children as performing above the Canadian norm and teachers rated children as performing below the Canadian norm.

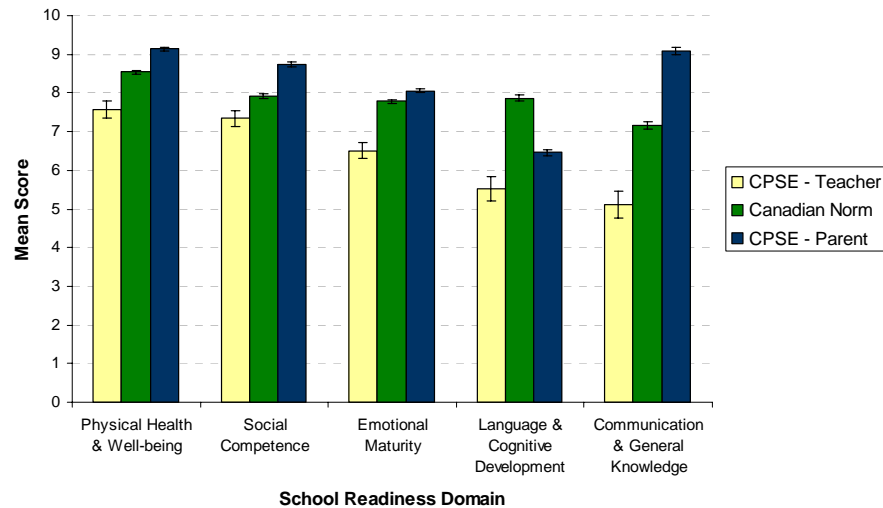


Figure 2. CPSE teacher, parent and youngest subset of Canadian norm means for each S-EDI domain.

### e) Percentage Scoring Above and Below Canadian Norm

Although the average teacher reported level of school readiness in the CPSE cohort was significantly below the Canadian norm, a number of CPSE children are performing at levels above this norm in some domains. Specifically, teachers rated just under half (49.5%) of the CPSE cohort above the Canadian norm on the physical health and well-being and social competence domains. However, around 70% of children were rated below the Canadian norm on the emotional maturity, language and cognitive development and communication and general knowledge domains, demonstrating specific areas of weakness for a large portion of the CPSE cohort.

### f) Index of Vulnerability

As demonstrated in Figure 3 below, just over 65% (n=66) of children did not score in the lowest 10% of the CPSE cohort on any of the five S-EDI domains, according to teacher ratings. However, close to one-fifth (19%, n=19) of the children scored low on one of the five domains, with a further 11% (n=11) scoring low on two domains. Four percent (n=4) of the cohort scored low on three out of five domains, while 1% scored low on four of the five S-EDI domains. None of the CPSE cohort scored low on all five of the domains.

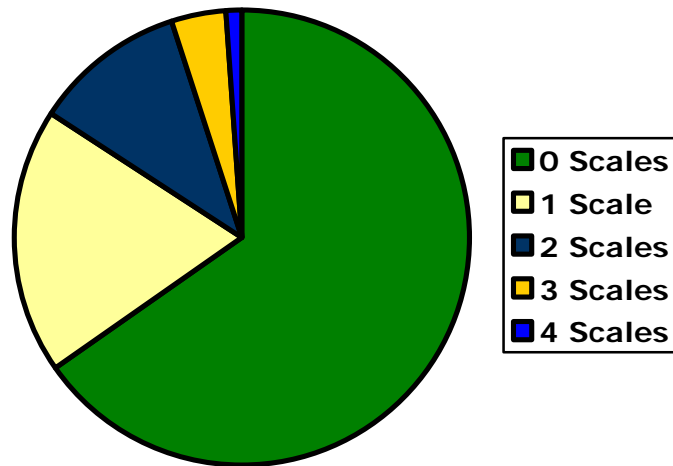


Figure 3. Number of S-EDI scales on which children were vulnerable (i.e., lowest 10%) as rated by teachers

## 2. Additional Behavioural Item Comparisons

By including the additional behavioural questions (discussed in detail above), comparisons on behavioural domains can be made to a representative Irish sample, which is beneficial given potential social, economic, and cultural differences between not only Ireland and Canada, but also disadvantaged and non disadvantaged populations. The results of this analysis are summarised below. Please refer to Table 2 of Appendix C for the reported test statistics and  $p$  values.

### a) CPSE Teacher Reported Additional Behavioural Domains

CPSE teachers rated the prosocial behaviour domain highest, with hyperactive/inattentive behaviour receiving the second highest rating. Teacher reports of anxious and oppositional/defiant behaviours were rated slightly lower. Finally, teacher ratings were lowest in terms of aggression.

### b) CPSE Parent Reported Additional Behavioural Domains

Similar to the teacher reports, prosocial behaviour received the highest score in terms of parent ratings. Parent rated oppositional/defiant and hyperactive/inattentive domains were rated similarly with the second highest scores. Finally, parent ratings show that children display few anxious and aggressive behaviours.

### c) Comparison of Teacher and Parent Reported Additional Behavioural Domains

Significant differences emerged between teacher and parent ratings of oppositional/defiant behaviour, hyperactive/inattentive behaviour, anxious behaviour, and prosocial behaviour, such

that parents rated children in the 2008-2009 CPSE cohort as displaying more oppositional and defiant behaviours as well as more prosociality compared to teachers. Teachers, on the other hand, rated children as displaying more hyperactivity/inattention and anxiety. No significant differences were observed between the parent and teacher ratings of aggression.

#### **d) Comparison of CPSE Teacher Reported Behaviours and *Lifeways* School Reported Behaviours**

As part of the *Lifeways Cross Generational Cohort Study* parents were asked to rate the frequency of their child's behaviours as they occur separately in the home setting and the school setting. This section compares parent reports of children's behaviours in school using the *Lifeways* data and teacher ratings of the CPSE cohort.

Similar to the teachers in the CPSE cohort, parents from the *Lifeways* study rated their children highest on the prosocial domain and lowest on displaying aggressive behaviour. On the remaining domains, the *Lifeways* parents rated their children relatively low compared to the teacher ratings of the children in the CPSE cohort. Group differences between children in the *Lifeways* study and children in the CPSE cohort were significant across all additional behavioural domains. Children in the *Lifeways* study were rated as being less aggressive, less oppositional/defiant, less hyperactive/inattentive, less anxious, and more prosocial in a school setting than teacher ratings of children in the CPSE cohort.

#### **e) Comparison of Matched Education Subsample of CPSE Parent Reported Behaviours and *Lifeways* Home Reported Behaviours**

To facilitate comparisons with a similar Irish demographic, a subset of the *Lifeways* cohort was compared to a subset of the CPSE cohort. These subsets were created based on the respondent's highest level of education obtained. Observations were included if the respondent's highest level of education was less than a Junior Certificate qualification. Therefore, the comparisons are among those with the lowest education in both samples. Using this categorisation, parent rated behavioural domains of the CPSE cohort were compared to the parent ratings of the *Lifeways* cohort at home. Significant differences emerged on several of the domains. Specifically, parents rated children in the CPSE cohort as less aggressive and anxious, however there was a trend for parents in the CPSE cohort to rate children as more hyperactive/inattentive and prosocial than children in the *Lifeways* cohort.

### **C. Use of Teacher Reported School Readiness<sup>5</sup>**

Although both parent and teacher reports of school readiness were obtained, the remaining results discussed in the report are based on teacher reported school readiness for three main reasons:

1. Teachers have long been thought to be accurate assessors of a child's abilities (Heaviside & Farris, 1993) and by focusing on teacher reported school readiness, the results of this study can be readily integrated into the current literature as the majority of studies use teacher reported levels of school readiness (Rimm-Kaufman, Pianta, & Cox, 2000).
2. Teacher reported school readiness scores are used to help overcome problems of shared method variance that arise when you have the same person rating both the independent and dependent variables in analyses.
3. Parent and teacher ratings significantly differ across the majority of S-EDI domains. In particular, the CPSE children are rated significantly higher than the Canadian norms based on the parent report. As the normed data are based on a representative sample of Canadian children, which includes children from all social backgrounds, one would expect, on average, the Canadian norms to be higher than the CPSE scores (as demonstrated in the CPSE teachers rating) which are based on children from a designated disadvantaged community.

### **D. Group Differences in School Readiness**

For the remaining analyses, any significant or trend level (i.e.,  $p < .10$ ) findings for the main five S-EDI domains and the additional behavioural domains are reported. In addition, any statistically significant subdomains within these significantly different domains are also discussed. Statistical information is presented in Tables 3-6 in Appendix C.

#### **1. Child Age**

Children's age is positively correlated with physical health and well-being, suggesting that older children display better physical and mental health than younger children, particularly in terms of physical independence and gross and fine motor skills. Older children also are rated by teachers as displaying higher levels of social competence, and in particular, approaches to learning. Correlations also suggest that older children perform better on the language and cognitive development domain, with a trend suggesting this relationship is influenced by higher levels of basic literacy. Interestingly, in terms of the additional behavioural items, child age was negatively associated with the prosocial behaviour domain, suggesting that the younger children exhibit higher levels of prosociality than older children.

#### **2. Gender**

Significant gender differences emerged for the S-EDI construct of emotional maturity, such that boys are rated as displaying lower levels of emotional maturity than girls. Specifically, the subdomains of emotional maturity reveal a trend indicating that boys display lower levels of

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<sup>5</sup> Analyses based on parent reported school readiness are available upon request.

prosocial and helping behaviour than their female classmates. Gender differences in the physical health and well-being, social competence, language and cognitive development, and communication and general knowledge domains did not reach significance.

In terms of the additional behavioural items, teachers rated boys as displaying significantly more aggression and less prosocial behaviour compared to girls. Gender differences in oppositional/defiant behaviour, hyperactive/inattentive behaviour, and the anxious behaviour domains did not reach significance.

### **3. Siblings**

Information on whether the CPSE child lived in the same household as any siblings was available for 89% (n=90) of the sample. Of these, 18% (n=17) were the only child living in the household, while the remaining 82% were living with one or more siblings.

Children with no siblings in the household were rated as displaying significantly higher levels of social competence compared to children with siblings. Specifically, pupils without siblings display significantly more respect and responsibility behaviours than pupils who have at least one sibling. Additionally, trends in the data show that pupils with no siblings display higher levels of social competence with peers, higher levels of emotional maturity and significantly lower levels of aggression than do their classmates with siblings. Presence of siblings did not have an effect for the physical health and well-being, language and cognitive development, or the communication and general knowledge domains.

In terms of the additional behavioural items, children with no siblings are rated as displaying significantly less oppositional/defiant behaviour and trends reveal that these children also display fewer hyperactive/inattentive behaviours. Differences in the aggressive behaviour, anxious behaviour, and prosocial behaviour did not reach significance.

### **4. Relationship Status**

In regards relationship status, one-third (n=29) of respondents reported they are single, 30% (n=27) are married, and 22% (n=20) are living with their partner. One in ten (10%; n =9) have a partner they are not living with and just over 4% are separated or widowed.

In order to determine if the children's school readiness differ depending on parental relationship status two categories were derived: 'single' comprises respondents who indicate they are single, legally separated, or widowed; 'being in a relationship' are those who are married, cohabitating, or have a partner with whom they are not living.

Although the association between the S-EDI domains and relationship status of the respondent did not reach statistical significance for any domain, trends in the data show that children of single parents are performing lower on measures of physical health and well-being, gross and fine motor skills, language and cognitive development, and basic literacy.

Differences in the additional behaviour domains of aggressive behaviour, oppositional defiant behaviour, hyperactive/inattentive behaviour, anxious behaviour, and prosocial behaviour did not reach significance.

## **5. Parental Age**

The mean age of parents in the 2008-2009 CPSE cohort is approximately 30 years old (SD = 5.53), with ages ranging from 22 to 45 years.

Analyses were conducted to examine whether the children of young parents differ in terms of school readiness compared to children of older parents. To achieve this, respondents were divided into two groups based on their age when the CPSE child was born. The first group consisted of those who were 20 years old or younger when the child was born and the second group consisted of those who were older than 20 years when the child was born. In the sample, 18% (n=15) are classified as being a young parent. Although no significant differences emerged based on this categorisation, trends in the data reveal differences in the communication and general knowledge category such that children of older parents perform higher in this domain.

Differences in the additional behavioural domains based on parent's age did not reach significance.

## **6. Parental Education**

The highest level of education attained by the majority (28%, n=25) of the CPSE respondents is the Junior/Group/Inter Certificate and the average school leaving age is 16 years old. Just over 11% (n=10) of respondents' highest level of education attained is Primary Education, while 16% (n=14) have completed Lower Secondary. Almost 15% (n=13) have Upper Secondary education, 14% (n=12) have the Leaving Certificate, 14% (n=12) have some form of non-degree qualification and finally, the highest level of education for 2% (n=2) of respondents is a Primary degree.

The educational categories were combined to enable a comparison between low and high educated parents. The low education group contains respondents who did not attend school, had primary education, or lower secondary education. It is important to note that the respondents represented in the low education group did not have a Junior Certification. The low education categorisation comprises approximately 28% (n=25) of the sample. For purposes of these analyses, the 'high' education categorisation was derived to include all respondents who have reached their Junior Certification or higher. The 'high' education category in this sample represents approximately 72% (n=64) of the total cohort.

Results reveal that children of parents in the low education group were rated by teachers as displaying significantly less social competence as measured by the S-EDI. Specifically, children of low educated parents were significantly less socially competent in their interactions with peers and a trend showed that they displayed less respect and responsibility. Additionally, children of parents with low education display significantly less emotional maturity, particularly in terms of high levels of aggression and anxious and fearful behaviour, compared to children of parents



who have reached the Junior Certification. Finally, there were trends in the data to suggest that children of parents with low education display lower levels of language and cognitive development, in particular, basic literacy skills. Differences in physical health and well-being and communication and general knowledge did not reach significance.

In terms of the additional behavioural items, children of parents in the low education group are significantly more aggressive, oppositional/defiant, and hyperactive/inattentive than children of parents in the higher education group. Differences in anxious and prosocial behaviour did not reach significance.

## **7. Employment Status<sup>6</sup>**

The majority of respondents (34%, n=30) in the cohort are looking after their home or family, 24% (n=21) are in paid work, 5% (n=4) are on leave from paid work, 18% (n=16) are unemployed, 10% (n=9) are in paid FAS training, and 2% (n=2) are in unpaid FAS training. Five percent of parents who responded to the question on occupation categorised themselves as “Other.” Of the respondents who are currently in paid work, 95% (n=20) provided information on the number of hours worked. The average number of hours worked per week is 24.6.

Employment status was divided into two categories for further analyses. As 94% of respondents were biological mothers and the employment status of mothers and fathers can be quite different, non maternal observations were excluded from the analysis. This resulted in excluding a total of five respondents. The employment categories were based on those in paid work, at least part time (including paid training courses), and those not in paid work. Results showed that children of employed mothers were rated as showing significantly higher levels of social competence. Specifically, these children were rated higher in regards to respect and responsibility and approaches to learning. Trends in the data suggest that children of employed mothers display higher levels of emotional maturity, a finding that is most likely driven by the significant subdomain finding that these children display lower levels of aggression. Differences in physical health and well-being, language and cognitive development, and communication and general knowledge did not reach significance.

In terms of the additional behavioural items, children of employed mothers were rated as displaying fewer oppositional/defiant behaviours and there was a trend to suggest that these children display lower levels of hyperactivity/inattention than children of non employed mothers. Differences in aggressive behaviour, anxious behaviour, and prosocial behaviour did not reach significance.

## **8. Social Welfare Dependency**

Over two-thirds of the sample (69%, n=55) are receiving social welfare payments such as job seekers benefit, social welfare payments, rent allowance, disability allowance, or job seekers allowance. Social welfare is a good proxy for socio-economic status (SES) as there is often a

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<sup>6</sup> Note that the majority (94%) of respondents were biological mothers of the children, thus these figures largely represent the employment status of mothers.

high correlation between welfare dependency and SES indicators of low education, income and social class.

Differences reached significance for the social competence and emotional maturity domains, such that children in families receiving social welfare payments were rated as displaying less social competence and lower levels of emotional maturity. In relation to social competence, significant differences emerged in the subdomain of approaches to learning and trends show a similar effect for the subdomain of respect and responsibility, such that children in families who are in receipt of social welfare payments are performing below their classmates in these areas. Finally, and in regard to the emotional maturity domain, children of families in receipt of social welfare were rated significantly higher in terms of aggression and anxious/fearful behaviour. Differences in physical health and well-being, language and cognitive development, and communication and general knowledge did not reach significance.

Similarly, significant differences emerged in relation to the additional behavioural items, showing that children in welfare dependent households are displaying more problematic behaviour in school than children from families not in receipt of social welfare payments. Specifically, children of families in receipt of social welfare payments display more oppositional/defiant behaviour and hyperactive/inattentive behaviour. Additionally, trends in the data show that such children display more aggression than their classmates not in receipt of social welfare, which is in line with findings from the S-EDI. Differences in anxious and prosocial behaviour did not reach significance.

## **9. Centre-Based Childcare**

Respondents provided information on whether their children had received any form of childcare prior to entering school, including being looked after by grandparents, relatives, other friends, a nanny, or attending crèche, nursery, preschool or Montessori. The survey shows that 85% of children (n=80) experienced some form of childcare prior to starting school, with 82% attending centre-based care. The children who received childcare in a home setting (either being looked after by grandparents, other relatives or nannies) were in this type of care for, on average, 27.5 months (SD = 14.44). Children who received centre-based childcare either in a nursery or Montessori school spent 18 months (SD = 10.52) on average in this type of childcare.

Several differences in school readiness emerged depending on whether or not a child participated in centre-based childcare. The differences emerged on all five domains of the S-EDI, in addition to multiple subdomains. Children who attended any form of centre-based care, for any period prior to entering primary school, are rated as displaying significantly higher levels of physical health and well-being, gross and fine motor skills, social competence, respect and responsibility, approaches to learning, readiness to explore new things, emotional maturity, and less anxious and fearful behaviour. They also are rated significantly higher than children who did not attend centre-based care in terms of levels of language and cognitive development, basic literacy, interest in literacy, numeracy, and memory, as well as higher levels of communication and general knowledge.

Although fewer differences emerged in terms of the additional behavioural items, children who attended centre-based care were rated by teachers as displaying fewer opposition/defiant and hyperactive/inattentive behaviours. Differences in aggressive behaviour, anxious behaviour, and prosocial behaviour did not reach significance.

### **E. Parenting and School Readiness**

Reports from the 'Parenting Styles and Dimensions Questionnaire' show that respondents report using a significantly higher level of authoritative parenting behaviours than authoritarian and permissive behaviours, while they use a significantly higher level of permissive behaviours than authoritarian behaviours. The authoritative parenting style is characterised by warmth and support, while the authoritarian style is characterised by low responsiveness and high control. The permissive parenting style, although characterised by warmth, is one in which parents exert little control over children.

Authoritative parenting is positively correlated with parent rated emotional maturity, communication and general knowledge, and prosocial behaviour, suggesting that higher self-reported use of authoritative parenting behaviours are related to higher parent reported levels of school readiness of children on each of these domains. Additionally, trends in the data show a positive relationship between use of authoritative parenting and parent reported language and cognitive development. Conversely, authoritative parenting is negatively associated with aggressive behaviour and there is a trend for authoritative behaviours to be negatively associated with hyperactivity/inattention. Authoritarian and permissive parenting behaviours, on the other hand, are both negatively correlated with parent rated emotional maturity, indicating that children of parents who report using more frequent harsh or inconsistent parenting behaviours are reported as having lower levels of school readiness in this domain. Permissive parenting is negatively associated with physical health and well-being, social competence, and prosocial behaviour suggesting that greater use of lax parenting is associated with lower parent reported levels of physical health and well-being, social competence, and prosocial behaviour in children.

Authoritative and permissive parenting are positively correlated with oppositional/defiant behaviour and hyperactivity/inattentive behaviour, suggesting that higher use of these parenting behaviours is associated with poorer school readiness. Authoritarian parenting is negatively correlated with language and cognitive development and there is a trend illustrating a negative relationship between authoritarian parenting and social competence. Furthermore, there is a significant positive correlation between authoritarian parenting behaviours and aggression.

Despite the reported correlations between parenting behaviours and parent reports of children's school readiness, few significant relationships emerged between parenting behaviours and teacher reports of school readiness. Specifically, three discernable relationships emerged among these variables. First, authoritarian parenting behaviours are positively associated with teacher reports of oppositional/defiant behaviours. Second, teacher reported physical health and well-being is negatively correlated with parent rated use of permissive parenting behaviours. Lastly, there is a trend suggesting that permissive parenting is positively associated with teacher reported hyperactive/inattentive behaviour.

## **V. Summary & Conclusion**

School readiness is a multifaceted concept, encompassing several domains of development. As different areas of school readiness may have different relationships with child and family characteristics, it is important to measure each domain of school readiness separately. By doing this, one can gain a more complete reflection of school readiness and the factors that influence a child's abilities at school entry.

The 2008-2009 CPSE report examines this holistic view of school readiness among a small sample of children living in a disadvantaged urban community of Ireland. For the purpose of this study, assessments of school readiness were obtained via teacher and parent report using the short form of the Early Development Instrument. Several additional questions related to behaviours associated with school readiness were also measured to facilitate comparisons with a representative sample of Irish children.

### **A. School Readiness in the 2008-2009 CPSE Cohort**

The Short Early Development Instrument (S-EDI) (Janus et al., 2005) enabled the parent and teacher ratings of school readiness to be compared to a normative sample of Canadian children. Although arguments regarding cultural, social and economic differences between Canada and Ireland can be made, it is important to note that there are no available representative or comprehensive data on the school readiness of Irish children. Research has highlighted the stability of EDI ratings across different groups of children (Guhn, Gaderman, & Zumbo, 2007) and the S-EDI has been used in Canada, America, Australia and several other countries illustrating its cross cultural utility and validity (e.g., Brinkman et al., 2007). By using the S-EDI, the levels of school readiness in the CPSE cohort can be compared to a representative sample, albeit a Canadian one, facilitating conclusions regarding the school readiness of children in this cohort.

Several statistical differences emerged between parent and teacher rated school readiness and the Canadian norms. The general pattern shows that teachers rated children in the CPSE cohort as displaying significantly lower levels of school readiness than the Canadian norm, while parents rated children in the cohort as displaying significantly higher levels of school readiness than the Canadian norm. While on average children in the CPSE sample scored below the norms across all domains based on the teacher reports, approximately half the sample are performing above the norm in regards physical health and well-being and social competence and one-third of the sample are scoring above the norm in the other three domains. Additionally, results show that parents rated children as displaying higher levels of physical health and well-being, social competence, emotional maturity, and communication and general knowledge than teachers. Although the difference between parent and teacher rated language and cognitive development was not significant, there is a trend to suggest that parents also rate their children higher in this domain.

To compliment the S-EDI, additional behavioural items were included in the questionnaire to facilitate comparisons with a national Irish sample. Significant differences emerged on the majority of these domains, with patterns mirroring those elucidated in the S-EDI. Specifically,

teachers rated children in the CPSE cohort as displaying significantly more behaviours that are negatively associated with readiness for school such as aggression, oppositional/defiant behaviours, hyperactivity/inattention, and anxiety. Additionally, teachers rated children as displaying fewer prosocial behaviours compared to the behaviours ratings in the *Lifeways* cohort. Results for the parent rated items, on the other hand, were mixed. Specifically, parents rated children in the CPSE cohort as being more prosocial, less anxious, less aggressive, and more hyperactive/inattentive than the children in low education subsample of the national Irish sample. Although this measure does not include every domain of school readiness, it is the first step to comparing the CPSE cohort to a representative sample of children growing up in Ireland and illustrates that children in these disadvantaged areas are performing below a representative sample of Irish children on these specific domains.

Results of this report support the concept that school readiness is multidimensional in nature, encompassing several domains of development. It is important to note that several differences emerged for the social competence and emotional maturity domains of school readiness. This further provides evidence for parents, schools, practitioners, and researchers to take a more holistic approach to the definition of school readiness. Additionally, these findings demonstrate the importance of social and emotional development in preparing a child for success in school and such non-cognitive domains should also be targeted when designing programmes to promote school readiness of young children.

## **B. Group Differences in School Readiness**

In addition to measuring the level of school readiness in the *PFL* catchment area, the report also investigates how school readiness differs by demographic and socioeconomic factors. The report replicates several of the findings from the 2004 school readiness survey conducted in the catchment area (Kiernan et al., 2008). Older children were reported as being more ready for school. In addition, girls were more emotionally mature, more prosocial, and less aggressive than boys. Several group differences in school readiness also were identified between high and low resource families, with children from high resource families typically performing above those from low resource families. Specifically, children of parents with less than a Junior Certificate qualification, families in receipt of social welfare payments, and those of single parents were not as ready for school as their classmates; findings supported in the literature (Janus & Duku, 2007). It is important to note that a lack of resources may play a direct role in school readiness. For example, parents of children who are less ready for school may not possess the necessary financial, material, and social resources to help prepare their children for school.

Another interesting finding emerged in the relationship between the presence of siblings and child school readiness. Children with no siblings were rated as displaying higher levels of social competence, emotional maturity, less oppositional and defiant behaviours, and less hyperactivity and inattentive behaviours than those with siblings. There are several plausible explanations for this unexpected finding. First, children may be modelling their behaviour after their parents, rather than siblings, and parents may be exhibiting more socially competent and emotionally mature behaviours than children. Second, parents of lone children may have more time to spend with their children and this time may be more interactive, thus further providing the opportunity for children to learn these skills through these vertical relationships with parents. Third, children are often influenced by the behaviours of children or siblings they regularly interact with. It may

be that children with siblings are exposed to more negative behaviours, therefore are more likely to engage in these behaviours.

### **C. Childcare & School Readiness**

As formal childcare has been identified as one of the key promoters of early school readiness (please see full report for detailed discussion), the CPSE survey collected information about the children's childcare experiences prior to school entry in terms of childcare type, duration and starting age. A significant finding of this report is that the majority of children in the sample had experienced some form of centre-based childcare prior to starting school. The results also indicate that children experienced informal childcare (e.g., care by grandparents, other relatives or nannies) for an average of 28 months and formal childcare (care in nursery or Montessori school) for 18 months. Studies typically find that children from disadvantaged areas are more likely to avail of informal, rather than formal, childcare (Côté, Doyle, & Petitclerc, 2009) however this result is not borne out in the CPSE sample.

Several significant relationships were identified between participation in centre-based childcare and school readiness. Children who participated in centre-based care were rated higher than children who did not attend centre-based childcare on all domains of school readiness. These findings are consistent with current literature which suggests that centre-based childcare is beneficial for children's development. There is also evidence that the benefits of childcare may be greatest for those from disadvantaged backgrounds as childcare can play a protective role for children from low resource families. As demonstrated in this report, these effects can impact on all areas of development including cognitive ability (Geoffroy et al., 2006; Caughy, DiPetro, & Strobino, 1994), physical aggression (Borge, Rutter, Côté, & Tremblay, 2004) and emotional maturity (Côté, Borge, Geoffroy, Rutter, & Tremblay, 2008).

Studies consistently show that the quality of childcare matters (Burchinal et al., 2000), particularly in terms of the qualification of childcare staff, the stability of staff, and the structure and content of daily activities. However, it is important to note that this study does not control for the quality of the childcare settings which the CPSE cohort attended. Síolta, the National Quality Framework for Early Childhood Education, which provides the first nationally agreed set of standards for early childhood care and education in Ireland, is currently being implemented by the local pre-schools, schools and childcare settings in the CPSE catchment area as part of the *Preparing for Life* programme. This framework is set to raise the standards of the childcare settings within the CPSE community, therefore future CPSE surveys may be able to incorporate these measures to analyse the effects on school readiness over time.

### **D. Differences in Parent & Teacher Reported School Readiness**

An important observation of this report is that several differences emerged between teacher and parent reports on both the S-EDI and the additional behavioural domains. Such discrepancies across informants have been documented elsewhere and are a common finding in the literature (e.g., Gagnon, Vitaro, & Tremblay, 1992; Shaw, Hammer, & Leland, 1991; Tasse & Lecavalier, 2000). Parents and teachers often have different definitions of school readiness, with parents focusing more often on academic skills, and teachers on nonacademic skills (Knudsen-Lindauer & Harris, 1989; West, Hausken, & Collins, 1993). The discrepancy between parent and teacher reported school readiness may be explained by parents perceiving the same child behaviours

differently than teachers or alternatively, children may behave differently in a school context than in a family context.

Although the lack of concordance between parent and teacher ratings of children's school readiness may be viewed simply as a methodological problem, it may represent a more interesting finding. One potential explanation is that parents in disadvantaged areas may view their children as thriving in the environment and therefore they may not recognise any weaknesses in their children's school readiness, and subsequently they may not recognise the need for early intervention. Furthermore, these results cannot definitively show whether these discrepancies in parent and teacher reports of child's school readiness are simply due to a response bias in terms of the parents or teachers, or whether the difference between parent and teacher ratings is due to context specific behaviour on the part of the children.

### **E. Strengths and Limitations of the Study**

The present study has several strengths. First, the reliability of the scales used in the analyses was acceptable, with the reliability of several scales falling above the .80 level. Additionally, the 99% response rate of teachers and 76% of parents is high for a study of this type. Another clear strength of the study is that non-standard statistical methods were employed specifically tailored to accommodate the small sample size used in the analyses. Another benefit of the study is the holistic approach to school readiness through which this survey was designed. Lastly, although the results reported here focused on teacher reported school readiness, data were also obtained for parent reports of school readiness. By obtaining both teacher and parent reports of school readiness, important differences in these ratings were elucidated which has several implications for future work in this area.

There are also several limitations to the study that should be noted. First, all the analyses conducted to test for differences in school readiness across the range of socio-demographic factors represent correlations or associations in the data. They are indicative of underlying relationships that may exist between two factors, however they are not necessarily causal relationships, nor should they be interpreted as such. Due to the relatively small sample size, controlling for such potentially confounding factors is not possible. However, as the CPSE survey will be conducted annually for the next four years, the sample size is set to grow, which will allow us to estimate multiple regression models which will help uncover and disentangle some of these relationships. Therefore, caution should be taken when interpreting the results of this first study.

### **F. The Need for the *PFL* Intervention**

The 2008-2009 CPSE was conducted as part of an overall evaluation of the *PFL* early childhood intervention programme. It is clear, based on teacher assessments of school readiness, that children in the *PFL* catchment areas are not performing to the level of other children at school entry, a finding that provides quantitative evidence for the need of the *PFL* intervention. Additionally, the vast differences between parent and teacher assessments of school readiness provide solid evidence that any intervention aiming to improve levels of school readiness in this area must integrate several contexts of development rather than simply focusing on one context.

## **G. Future CPSE Surveys**

The current report provides a comprehensive analysis of the levels of school readiness of junior infants children in a disadvantaged urban community in Ireland. The survey will be replicated and conducted annually until 2012. One of the aims of this study is to measure the general level of school readiness in the area for the cohort of children who are not receiving the *PFL* programme. By comparing the year-on-year changes in school readiness, this study will indicate if the *PFL* programme is generating positive externalities. It will determine whether providing an intensive school readiness intervention to the community's younger cohort will have knock-on effects for the older children in the community starting school between 2008-2012. The current report elucidates several interesting relationships in the data in terms of factors influencing school readiness. However, determining the causal nature of these relationships is constrained by the small sample size. Combining the samples of future CPSE surveys over time will provide much larger data which will deepen the richness of the analysis and allow us to fully investigate the determinants and antecedents to school readiness.



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## VII. Appendix A: Instruments: Example Items

Table 1  
*Domains, subdomains, and sample items for the S-EDI*

Domain	Number of Items	Example Items
<b>Physical Health &amp; Well-being</b>		
<i>Physical Readiness for the School Day</i>	3	Over/underdressed for school related activities; too tired/sick to do schoolwork
<i>Physical Independence</i>	3	Independent in washroom habits most of the time; well coordinated
<i>Gross and Fine Motor Skills</i>	3	Ability to manipulate objects; overall physical development
<b>Social Competence</b>		
<i>Respect and Responsibility</i>	3	Respects the property of others; accepts responsibility for actions
<i>Approaches to Learning</i>	3	Works independently; able to follow class routines without reminders
<i>Readiness to Explore New Things</i>	3	Eager to play with a new toy; eager to play with/read a new book
<i>Overall Social Competence with peers</i>	3	Ability to get along with peers; plays and works cooperatively with peers at age appropriate level
<b>Emotional Maturity</b>		
<i>Prosocial and Helping Behaviour</i>	3	Will try to help someone who has been hurt; comforts a child who is crying or upset
<i>Aggressive Behaviour</i>	3	Gets into physical fights; bullies or is mean to others
<i>Anxious and Fearful Behaviour</i>	3	Appears fearful or anxious; appears worried
<i>Hyperactive and Inattentive Behaviour</i>	3	Can't sit still; is restless or fidgets
<b>Language and Cognitive Development</b>		
<i>Basic Literacy Skills</i>	3	Is able to attach sounds to letters; is able to identify at least 10 letter of the alphabet
<i>Advanced Literacy Skills</i>	3	Is able to read simple words; is able to read simple sentences
<i>Basic Numeracy Skills</i>	3	Is able to count to 20; is able to say which is the bigger of the two
<i>Interest in Literacy/Numeracy and Memory</i>	3	Is interested in reading; is interested in games involving numbers
<b>Communication &amp; General Knowledge</b>		
<i>Communication &amp; General Knowledge</i>	3	Is able to tell a story; is able to communicate in an understanding way

**Table 2**  
*Sample items for the additional behavioural domains*

Domain	Number of Items	Example Items
<i>Aggressive Behaviour</i>	3	Physically attacks people; kicks, hits or bites other children
<i>Oppositional/Defiant Behaviour</i>	3	Refuses to comply with rules or requests; punishment doesn't seem to change his/her behaviour
<i>Hyperactivity/Inattention</i>	6	Has difficulty waiting his/her turn in games; is inattentive; unable to concentrate or pay attention for long
<i>Anxiety</i>	3	Too fearful or anxious; worries
<i>Prosocial Behaviour</i>	3	Tries to help someone who has been hurt; helps other children who are feeling sick

**Table 3**  
*Domains, subdomains, and sample items for the Parenting Strengths and Difficulties Questionnaire*

Domain	Number of Items	Example Items
<b>Authoritative Parenting</b>		
<i>Connection</i>	5	Encourages child to talk about the child's troubles; gives praise when child is good
<i>Regulation</i>	5	Explains the consequences of the child's behaviour; emphasizes the reasons for rules
<i>Autonomy</i>	5	Shows respect for child's opinions by encouraging child to express them; allows child to give input to family rules
<b>Authoritarian Parenting</b>		
<i>Physical Coercion</i>	4	Spanks child when disobedient; uses physical punishment as a way of disciplining child
<i>Verbal Hostility</i>	4	Explodes in anger toward child; scolds and criticises to make child improve
<i>Non-Reasoning/Punitive Behaviours</i>	4	Punishes by taking privileges away from child with little if any explanations; uses threats as punishment with little or no justification
<b>Permissive Parenting</b>		
<i>Permissive</i>	5	States punishments to child and does not actually do them; spoils child

## VIII. Appendix B: Descriptive Statistics

Table 1  
*Descriptive Statistics for Continuous Variables*

	N	Mean	SD	Min	Max
<b><i>Child Information</i></b>					
Age	92	4.35	0.64	2	7
<b><i>Teacher Information</i></b>					
Age	12	37.25	10.46	24	55
Years teaching	12	10.83	8.88	2	31
Years teaching Junior Infants	12	4.25	3.65	1	15
Years teaching at school	12	9.42	7.83	1	31
Number of students in class	7	14.70	1.30	13	16
<b><i>Household Information</i></b>					
Number of household members	91	4.69	1.44	2	9
No. of biological children	92	2.88	1.61	1	10
Number of siblings in household	94	1.84	1.52	0	7
<b><i>Respondent Information*</i></b>					
Age	92	30.48	5.53	22	45
<b><i>Childcare information</i></b>					
Length of time in home based care (months)	14	27.50	14.44	12	52
Length of time in centre based care (months)	80	18.44	10.52	6	45

\* 94% of respondents are the child's mother.

Table 2  
*Descriptive Statistics for Categorical Variables*

		n	%
<b><i>Teacher Information</i></b>			
Highest level of education completed	Non-degree qualification	1	8.33
	Primary degree	4	33.33
	Postgraduate qualification	7	58.33
<b><i>Respondent Information</i></b>			
Relationship to child	Biological Mother	87	93.55
	Foster Mother	1	1.08
	Biological Father	1	1.08
	Adoptive Father	4	4.30
Ethnic group	Irish	81	88.04
	Irish Traveller	9	9.78
	British	1	1.09
	Other White	1	1.09
<b><i>Household Information</i></b>			
Household weekly income	Less than €0	2	3.57
	€100-€150	1	1.79
	€150-€200	2	3.57
	€200-€250	5	8.93
	€250-€300	6	10.71
	€300-€400	11	19.64
	€400-€500	9	16.07
	€500-€600	6	10.71
	€600-€750	6	10.71
	€750-€900	5	8.93
	€900-€1000	1	1.79
	€1000-€1500	2	3.57
<b><i>Childcare Information</i></b>			
Type of Childcare	Grandparent	12	12.77
	Other relative	1	1.06
	Nanny	1	1.06
	Nursery	41	43.62
	Montessori	39	41.50

## IX. Appendix C: Results

*Note:* The p-values represent the probability that the result obtained is due to chance rather than a true relationship between variables. Consistent with the literature, p-values below 0.05 (5%) are considered to be statistically significant in the present report. A p-value of less than 0.05 (5%), 0.01 (1%), 0.001 (0.01%) conveys that the probability that the difference between the two groups is due to chance is less than 5%, 1% and 0.01% respectively. Trend level results were reported if the p value was equal to or less than .10.

Table 1

*Wilcoxon signed-rank and t-test results for comparisons of CPSE teacher ratings, parent ratings and Canadian norm on S-EDI*

Comparisons		Physical Health and Well-Being	Social Competence	Emotional Maturity	Language and Cognitive Development	Communication and General Knowledge
CPSE Parent vs. CPSE Teacher	Z	6.06	5.42	6.18	1.76	7.49
	p	***	***	***	†	***
CPSE Teacher vs. Canadian Norm	t	-6.11	-2.77	-7.41	-9.41	-6.82
	df	881	883	875	866	883
	p	***	**	***	***	***
CPSE Parent vs. Canadian Norm	t	4.01	3.97	1.64	-5.87	6.59
	df	874	874	868	864	876
	p	**	***	ns	***	***

ns = non significant; †  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$



Table 2

*Wilcoxon signed-rank results for comparisons between ratings on additional behavioural domains*

Domain	n	Mean	SD	n	Mean	SD	z	p
<b>CPSE Parent vs. CPSE Teacher</b>		<b>Parent</b>		<b>Teacher</b>				
Oppositional/Defiant Behaviour	94	3.16	2.38	101	2.24	3.16	3.27	**
Hyperactive/Inattentive Behaviour	92	3.29	2.32	101	4.82	3.34	-3.56	***
Anxious Behaviour	92	1.10	1.78	101	2.64	2.76	-5.07	***
Prosocial Behaviour	91	8.05	2.20	78	5.22	2.74	5.39	***
<b>Lifeways School vs. CPSE teacher</b>		<b>Lifeways</b>		<b>CPSE</b>				
Aggressive Behaviour	544	0.56	1.26	89	1.46	2.41	3.54	***
Oppositional/Defiant Behaviour	534	0.87	1.72	101	2.24	3.16	3.65	***
Hyperactive/Inattentive Behaviour	533	1.54	2.02	101	4.82	3.34	6.47	***
Anxious Behaviour	537	1.68	2.14	101	2.64	2.76	2.78	**
Prosocial Behaviour	530	6.62	2.85	78	5.22	2.74	-3.53	***
<b>Lifeways Home vs. CPSE Parent (low education subset)</b>		<b>Lifeways</b>		<b>CPSE</b>				
Aggressive Behaviour	83	2.87	2.36	67	1.27	1.90	-3.76	***
Hyperactive/Inattentive Behaviour	85	2.44	2.16	66	3.28	2.29	1.69	†
Anxious Behaviour	85	2.20	2.09	67	1.04	1.66	-3.46	***
Prosocial Behaviour	81	7.08	2.94	67	7.85	2.33	1.79	†

†  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

Table 3

*Spearman's rho non-parametric correlations representing the relationship between child age and school readiness*

Domain	Child Age
<b>S-EDI</b>	
Physical Health & Well-being	0.227*
<i>Physical Independence</i>	0.219*
<i>Gross and Fine Motor Skills</i>	0.270*
Social Competence	0.223*
<i>Approaches to Learning</i>	0.280**
Language and Cognitive Development	0.244*
<i>Basic Literacy</i>	0.186†
<b>Additional Behavioural Items</b>	
Prosocial Behaviour	-0.322**

†  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

Table 4

Monte Carlo Permutation test results for group differences in school readiness

Domain	n	Mean	SD	n	Mean	SD	Significance Level
<b>Gender</b>		<b>Male</b>			<b>Female</b>		
<b>S-EDI</b>							
Emotional Maturity	57	6.14	2.10	42	7.01	1.84	*
<i>Prosocial and Helping Behaviour</i>	43	5.17	3.00	35	6.31	2.79	†
<b>Additional Behavioural Items</b>							
Aggressive Behaviour	52	1.91	2.74	37	0.83	1.71	*
Prosocial Behaviour	42	4.54	2.82	36	6.02	2.46	*
<b>Presence of Siblings</b>		<b>No Siblings</b>			<b>Siblings</b>		
<b>S-EDI</b>							
Social Competence	16	8.33	1.94	74	7.20	2.03	*
<i>Social Competence with Peers</i>	16	7.08	2.24	74	5.56	3.11	†
<i>Respect and Responsibility</i>	16	8.96	2.01	74	7.25	2.65	*
Emotional Maturity	14	7.42	1.42	74	6.32	2.17	†
<i>Aggressive Behaviour</i>	14	0.54	1.11	67	2.08	2.86	*
<b>Additional Behavioural Items</b>							
Oppositional/Defiant Behaviour	16	0.52	2.08	74	2.08	3.16	*
Hyperactive/Inattentive Behaviour	16	3.37	3.67	74	4.94	3.24	†
<b>Parental Relationship Status</b>		<b>Single</b>			<b>In Relationship</b>		
<b>S-EDI</b>							
Physical Health & Well-being	32	6.85	2.39	55	7.76	2.16	†
<i>Gross and Fine Motor Skills</i>	30	5.47	3.55	44	6.82	3.24	†
Language and Cognitive Development	28	4.93	2.88	51	6.12	2.91	†
<i>Basic Literacy</i>	31	5.97	3.38	54	7.38	3.66	†
<b>Parental Age</b>		<b>20 years old or younger</b>			<b>Older than 20 years</b>		
<b>S-EDI</b>							
Communication & General Knowledge	15	3.78	3.42	69	5.70	3.53	†
<b>Parental Education</b>		<b>Low Education</b>			<b>High Education</b>		
<b>S-EDI</b>							
Social Competence	25	6.60	1.73	62	7.60	2.12	*
<i>Social Competence with Peers</i>	25	4.20	2.68	62	6.26	3.00	**
<i>Respect and Responsibility</i>	25	6.67	2.85	62	7.80	2.48	†
Emotional Maturity	25	5.42	2.23	61	6.83	1.87	**
<i>Aggressive Behaviour</i>	21	6.51	3.44	57	8.76	2.17	**
<i>Anxious and Fearful Behaviour</i>	25	3.20	3.00	62	5.70	3.45	**
Language and Cognitive Development	21	4.76	2.48	58	6.14	3.03	†
<i>Basic Literacy</i>	23	5.94	3.72	62	7.42	3.44	†
<b>Additional Behavioural Items</b>							
Aggressive Behaviour	19	3.07	3.43	57	1.01	1.92	**
Oppositional/Defiant Behaviour	25	3.43	3.47	62	1.84	2.88	*

Hyperactive/Inattentive Behaviour	25	6.37	2.79	62	4.06	3.28	**
<b>Maternal Employment Status</b>							
	<b>Employed</b>			<b>Not Employed</b>			
<b>S-EDI</b>							
Social Competence	35	8.13	1.78	49	7.02	1.99	*
<i>Respect and Responsibility</i>	35	8.43	2.17	49	7.04	2.81	*
<i>Approaches to Learning</i>	35	8.43	2.25	49	7.18	2.48	*
Emotional Maturity	34	7.02	1.74	49	6.19	2.33	†
<i>Aggressive Behaviour</i>	31	8.98	1.81	45	7.65	3.17	*
<b>Additional Behavioural Items</b>							
Oppositional/Defiant Behaviour	35	1.36	2.48	49	2.77	3.37	*
Hyperactive/Inattentive Behaviour	35	3.71	3.19	49	5.10	3.35	†
<b>Social Welfare Dependency</b>							
	<b>In Receipt of Social Welfare</b>			<b>Not in Receipt of Social Welfare</b>			
<b>S-EDI</b>							
Social Competence	54	7.28	2.00	25	8.20	1.59	*
<i>Respect and Responsibility</i>	54	7.35	2.83	25	8.53	2.11	†
<i>Approaches to Learning</i>	54	7.41	2.46	25	8.53	2.00	*
Emotional Maturity	53	6.16	1.67	25	7.23	1.71	*
<i>Aggressive Behaviour</i>	47	2.36	3.14	24	0.97	1.83	*
<i>Anxious and Fearful Behaviour</i>	54	5.53	3.48	25	3.40	3.35	*
<b>Additional Behavioural Items</b>							
Aggressive Behaviour	45	1.94	2.95	24	0.76	1.63	†
Oppositional/Defiant Behaviour	54	2.64	3.31	25	1.00	2.04	*
Hyperactive/Inattentive Behaviour	54	5.09	3.32	25	3.30	3.05	*
<b>Centre-Based Childcare</b>							
<b>S-EDI</b>							
Physical Health & Well-being	76	7.80	2.10	16	5.87	2.32	**
<i>Gross and Fine Motor Skills</i>	63	6.88	3.24	14	4.17	3.28	**
Social Competence	76	7.72	1.76	16	5.86	2.69	***
<i>Respect and Responsibility</i>	76	7.86	2.51	16	6.35	0.04	*
<i>Approaches to Learning</i>	76	8.00	2.18	16	5.31	3.29	***
<i>Readiness to Explore New Things</i>	76	9.01	1.37	16	6.98	3.40	***
Emotional Maturity	74	6.71	2.03	16	5.58	2.13	*
<i>Anxious and Fearful Behaviour</i>	76	4.61	3.51	16	6.56	3.36	*
Language and Cognitive Development	68	6.28	2.58	16	3.50	3.13	***
<i>Basic Literacy</i>	74	7.52	3.21	16	4.17	3.75	***
<i>Interest in literacy/numeracy &amp; memory</i>	74	8.92	2.53	15	5.33	4.14	***
Communication & General Knowledge	76	5.61	3.56	16	3.13	2.91	**
<b>Additional Behavioural Items</b>							
Oppositional/Defiant Behaviour	67	1.89	2.86	16	3.65	3.73	*
Hyperactive/Inattentive Behaviour	76	4.31	3.27	16	6.20	3.29	*

†  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

Table 5

*Wilcoxon signed-rank results for comparisons of parent reported use of parenting behaviours*

Comparisons	Z	p
Authoritative vs. Authoritarian	-8.37	<.0001***
Authoritative vs. Permissive	-8.13	<.0001***
Permissive vs. Authoritarian	-5.25	<.0001***

†  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

Table 6

*Spearman's rho non parametric correlations representing the relationship between parenting behaviours and school readiness*

Domain	Parenting Behaviour					
	Authoritative		Authoritarian		Permissive	
	Teacher	Parent	Teacher	Parent	Teacher	Parent
<b>S-EDI Domain</b>						
Physical Health and Well-Being	0.02	0.01	-0.09	-0.15	<b>-0.23*</b>	<b>-0.19*</b>
Social Competence	0.05	0.09	-0.09	<b>-0.19<sup>†</sup></b>	-0.02	<b>-0.21*</b>
Emotional Maturity	0.04	<b>0.26**</b>	-0.06	<b>-0.28**</b>	-0.12	<b>-0.20*</b>
Language and Cognitive Development	0.10	<b>0.17<sup>†</sup></b>	-0.14	<b>-0.22*</b>	-0.07	-0.11
Communication & General Knowledge	0.07	<b>0.24*</b>	-0.06	-0.02	-0.03	-0.07
<b>Additional Behavioural Items</b>						
Aggressive Behaviour	0.11	<b>-0.22*</b>	0.08	<b>0.32**</b>	0.15	0.16
Oppositional/Defiant Behaviour	-0.01	-0.10	<b>0.21*</b>	<b>0.34**</b>	0.15	<b>0.34**</b>
Hyperactive/Inattentive Behaviour	-0.03	<b>-0.18<sup>†</sup></b>	0.08	<b>0.26**</b>	<b>0.19<sup>†</sup></b>	<b>0.22*</b>
Anxious Behaviour	-0.10	-0.04	0.01	0.10	0.11	0.06
Prosocial Behaviour	-0.01	<b>0.29**</b>	-0.08	-0.05	-0.03	<b>-0.20*</b>

†  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$