



FIVE YEAR FOLLOW-UP (Q7) DESCRIPTIVE REPORT

March 2020

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Acknowledgements

We are extremely grateful to all the families who took part in this study and the All Our Families research team. We acknowledge and express our gratitude to the investigators, coordinators, research staff and managers. Initial funding for this cohort was provided by Three Cheers for the Early Years, the Alberta Children's Hospital Foundation and through Alberta Innovates Health Solutions Interdisciplinary Team Grant #200700595.



Technical Summary

About this Cohort of Women & Children

The All Our Families cohort includes over 3,000 mothers and children who have been participants since mothers were pregnant. This report is a summary of information collected when the children were 5 years of age. Recruitment into the All Our Families (formerly All Our Babies) cohort began in 2008 and concluded in 2011. Since then, we have collected information twice during pregnancy and at 4 months postpartum, as well as 1 year, 2 years, 3 years and 5 years post-birth. Five year data collection began in June 2014 and ended in October 2017. Data collection of the 8 year follow-up questionnaire recently concluded and is in the beginning stages of data editing, while the 12 year follow-up questionnaire is scheduled to be launched in August 2020.

This report presents findings from All Our Families mothers and children at 5 years of age and integrates information from earlier time points.

Objectives

1. To describe the AOF cohort with respect to demographics, lifestyle, mental health, social support, and service utilization when children were 5 years of age.
2. To describe the physical health, sleep habits, screen time, family activities, and child development outcomes of children in the cohort.
3. To describe the parenting experience and close relationships at 5 years post-birth.
4. To examine bivariate associations between specific child outcomes and i) household income, and ii) preterm birth status.

Methods

The All Our Families participants were contacted when their child was 5 years of age. Women who participated in the prenatal questionnaires and indicated at the time of enrollment that they would be willing to participate in future research were eligible for this follow-up study. The questionnaire was developed with input from health care providers, epidemiologists, child development experts, and community program experts. Due to delays in licensing agreements of scales used in the survey and resources related to the questionnaire development and study implementation, the survey was launched one year after the first AOF child turned 5 years old and data collection continued until the last child turned 5 years old. In total, 2,817 participants were eligible to receive the 5 year questionnaire.

Highlighted Results

The All Our Families participants represent the medically and socio-demographic low-risk pregnant and parenting population in Calgary. At the five year mark, participants were, on average, nearly 37 years old ($SD=4.4$), where a majority were married or living with a common-law partner (94.6%), had a post-secondary education (94.1%), and lived in a household earning \$80,000 or more a year (82.7%). Most participants were White/Caucasian (81.9%), born in Canada (81.5%), and primarily spoke English at home (90.4%). A large majority of AOF children lived in two-parent family households (95.2%) at the time, where 85.3% reported at least four members living in their household.

Among eligible participants for the 5 year study (N=2,817), women who completed the 5 year study were compared to women who did not complete the questionnaire. Data below was taken from the initial cohort study.

Compared to women who participated in the 5 year follow-up study, those who were part of the initial AOF study and **eligible** to complete the 5 year follow-up but did not participate were more likely to have the following characteristics:

- Less than 25 years old when they entered the study during pregnancy,
- Single, separated, or divorced,
- Did not complete post-secondary education,
- Low household income,
- Born outside of Canada,
- Non-white or Caucasian, and
- Not primarily English speaking household.

Based on participant's self-report using standardized tools, 16.1% displayed symptoms of depression (CES-D), 17.6% displayed symptoms of stress (PSS), and 16.3% displayed symptoms of anxiety (SSAI-SF). In comparison to results from previous AOF follow-up studies at 1, 2, and 3 years, the prevalence for anxiety at 5 years remained consistent with results from all previously reported follow-up studies, and stress at 5 years remained consistent with results from the 3 year study. Since the 1 year follow-up study, results showed the prevalence of depression symptoms has increased over time.



At the 5 year follow-up, children ranged in age from 4.9 to 7.6 years old, where 87% were between 4.9 to 5.5 years old. Approximately 52% were males and 6.6% of children were born preterm (<37 weeks). Nearly 93% of children lived in a two-parent family household and about one-third (33.8%) were spending time in a formal childcare setting (33.8%) such as a family day home, childcare centre, or a before and after school care program. On average, children in the study weighed 19 kg and were 111 cm tall. The most commonly experienced health conditions children were reported having were picky eating (39.8%), skin problems (29.3%), and gut problems (23.5%).

Overall, only 15.7% of children at the age of 5 were following the Canadian Paediatric Society and Canadian Behaviour Guidelines recommendations of less than 1 hour a day of screen time. On weekdays, approximately 55% of children had 1 hour or more screen time per day and on weekends, nearly 80.9% had 1 hour or more screen time per day. On weekdays, approximately 93% of children spent 1 hour or more per day in unstructured play and 43% of children spent 1 hour or more per day reading or looking at books. On weekends, nearly all children in the study were reported to spend 1 hour or more per day on unstructured play (99.1%) and 52% of children spent 1 hour or more per day reading or looking at books.



Approximately 88% of children were attending preschool or kindergarten by the 5 year follow up.

Approximately 12% of children experienced an injury that required medical attention in the 12 months leading up to the 5 year follow-up. On average, children at age 5 in the 5 year follow-up were napping 0.3 hours a day (SD=0.8) and sleeping 10.6 hours a night (1.0) in a typical 24 hour period. Over one-half (56.9%) of children followed a bedtime routine every night. Nearly one-half (48.2%) of children did not have trouble falling asleep and approximately 70% of children did not have trouble staying asleep. Almost all children in the study were able to fall asleep or stay asleep without prescription medication (99.8%) and without herbal non-prescription products (96.8%).

Based on maternal report on the Ages and Stages Questionnaire (ASQ-3), 7.8% of children had a communication delay and gross motor delay, 6.9% had a fine motor delay, 2.1% had a problem-solving delay, and 8.2% had a personal-social delay at five years of age. In comparison to two years of age, the delay prevalence in all domains decreased in frequency at age 5, however, in comparison to three years of age, children improved only in gross motor, fine motor, and problem-solving skills but not communication or person-social skills at age 5.

Child behaviour was measured using the Behaviour Assessment System for Children, where approximately 10% of children at age 5 were at-risk or clinically significantly at-risk of externalizing problems (hyperactivity, aggression). Nearly 17% of children scored at-risk or clinically significantly at-risk of internalizing problems (anxiety, depression, somatization), 12% were reported to be at-risk or clinically significantly at-risk according to the behavioral symptoms index (hyperactivity, aggression, depression, atypicality, withdrawal, attention problems), and 7% of mothers reported their children to be at-risk or clinically significantly at-risk for adaptive skills (adaptability, social skills, activities in daily living, functional communication).

Compared to children attending preschool or kindergarten, children who were not in school were **more likely** to be in a formal childcare arrangement or be cared for by a parent.

Compared to children in families with total household incomes of at least \$80,000, children in families with total household incomes below \$80,000:

- were **more likely** to spend 1 hour or more on screen time on a typical weekday,
- were **more likely** to spend greater than 2 hours per day in unstructured play on weekdays at age 5,
- were **more likely** to spend greater than 2 hours per day reading or looking at books on weekdays at age 5,
- were **more likely** to spend greater than 2 hours per day reading or looking at books on weekends at age 5,
- were **less likely** to spend more than 2 hours per week in lessons or instructional organized physical activities with a coach/instructor at age 5
- were **more likely** to be picky eaters, and

- were **more likely** to experience autism, Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder, or Global Developmental Delay,
- were **more likely** to have delayed problem-solving development on the ASQ-3,
- were **more likely** to have delayed personal-social development on the ASQ-3,
- were **more likely** to be delayed in at least 2 domains of child development on the ASQ-3.
- were **more likely** to be at risk of atypicality or behave in ways that are considered “odd” or commonly associated with psychosis,
- were **more likely** to be at risk of depressive problems,
- were **more likely** to be at risk of lower functional communication or ability to express ideas and communicate in a way others can easily understand.
- were **more likely** to be at risk of internalizing problems,
- were **more likely** to be at risk of overall problem behaviours (BSI),
- were **more likely** to be at risk of poorer adaptive skills.
- were **more likely** to be at risk of anger control problems,
- were **more likely** to be at risk of bullying behaviour,
- were **more likely** to be at risk of developmental social disorders,
- were **more likely** to be at risk of negative emotional self-control,
- were **more likely** to be at risk of negative emotionality,
- were **more likely** to be at risk of low resiliency,
- were **more likely** to feel they rarely or never have enough financial resources to meet their families’ needs, and
- were **more likely** to worry (most or all of the time) about having enough money to do what is important for their family.

Compared to children who were born term (37 weeks gestation or more), children who were born preterm (<37 weeks gestation):

- were **more likely** to experience autism, ADD/ADHD, or Global Developmental Delay,
- were **more likely** to have learning delays or speech delays,
- were **more likely** to be hospitalized or have surgeries,
- were **more likely** to have mental health problems,
- were **more likely** to have delayed gross motor development on the ASQ-3,
- were **more likely** to have delayed fine motor development on the ASQ-3,
- were **more likely** to have delayed problem solving development on the ASQ-3,
- were **more likely** to have delayed personal-social development on the ASQ-3,
- were **more likely** to be delayed in at least 2 domains of child development on the ASQ-3,
- were **more likely** to be at risk of lower functional communication,
- were **more likely** to be at risk of lower social skills,
- were **more likely** to be at risk of withdrawal behaviour,
- were **more likely** to be at risk of poorer adaptive skills,
- were **more likely** to be at risk of developmental social disorders,

Compared to children not at risk of anxiety behaviours, children who were identified at risk or clinically significantly at risk:

- were **more likely** to have mothers that were non-White/Caucasian,
- were **more likely** female,
- were **more likely** to have trouble staying asleep more than one night of the week,
- were **more likely** to have mothers with elevated perceived stress symptoms,
- were **more likely** to have mothers with elevated depressive symptoms,
- were **more likely** to have mothers with elevated anxiety symptoms, and
- were **more likely** to have mothers experiencing some or a lot of tension with their relationship with their partners.

Compared to children with delay on 1 or less child developmental domains (ASQ-3), children with delay on more than 1 developmental domains were **more likely** associated with not being in an informal or formal childcare environment, that is, being cared for by a parent. However, there were no differences seen for domain-specific delays. As such, caution in interpreting this finding is warranted.

Compared to mothers who work, mothers who reported not working for pay:

- were **more likely** to use minimal childcare arrangements or no childcare arrangements at all,
- were **more likely** to have children with delayed personal-social development on the ASQ-3, and
- were **more likely** to have children at risk or clinically significantly at risk for externalizing behaviour problems.

Compared to mothers who had effective parenting styles, mothers with higher scores of ineffective or hostile parenting on the NLSCY Parenting Subscale:

- were **more likely** to have elevated depressive symptoms,
- were **more likely** to have elevated anxiety symptoms,
- were **more likely** to experience some or a lot of tension in their relationship with their partner,
- were **more likely** to have higher levels of insecure adult attachment in a close relationship,
- were **more likely** to have higher levels of attachment anxiety in a close relationship, and
- were **more likely** to be time crunched or have higher levels of management stress.

Providing parents with resources and strategies at home, in the community and neighbourhoods, as well as in the workplace may have a positive impact on their child's behaviour and development, as well as improving the parents' own well-being and parenting methods.