Understanding & Promoting Well-being in Middle Childhood: MDI Trends & Data Dashboard

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Our work takes place on the traditional, ancestral, unceded territory of the xʷməθkʷəy̓əm (Musqueam) people.
Aboriginal Steering Committee

Established in 2003
Elder Reanna Erasmus
Aboriginal Steering Committee
Yellowknives Dene First Nation & Hupacasath First Nation
Child Development Monitoring System

- **TDi**: Toddler Development Instrument
  - 12 - 24 months
  - Parent & caregiver questionnaire
  - EARLY EXPERIENCES & CONTEXTS

- **CHEQ**: Childhood Experiences Questionnaire
  - Start of Kindergarten
  - Parent & caregiver questionnaire
  - EARLY EXPERIENCES & CONTEXTS

- **EDI**: Early Development Instrument
  - Mid-Kindergarten
  - Teacher questionnaire
  - SKILLS & COMPETENCES

- **MDi**: Middle Years Development Instrument
  - Grades 4 - 8
  - Student questionnaire
  - WELL-BEING & ASSETS

- **YDi**: Youth Development Instrument
  - Grade 11
  - Student questionnaire
  - WELL-BEING & ASSETS
Outline

• MDI Background, Overview, Participation
• MDI Data Trends Over Time
• Spotlight on Gender
• New MDI Questions
• Q & A
• MDI Data Dashboard
• Data in Action
Self-Report Survey for Children in Grades 4 to 8
Multiple Contexts:
Schools
Families
Neighbourhoods
Out of school time
MDI Dimensions

Measures areas of development strongly linked to well-being
MDI Participation 2009/2010 – 2022/2023

Grade 4: 6,765  Grade 5: 12,415  Grade 6: 6,428
Grade 7: 4,901  Grade 8: 12,069

Total overall (all years & grades): 279,469
MDI Participation, 2022/23

# Children by Grade

Project Level Participation Rate:
42,578/53,251 = 80%

School District Range:
60%-93%
<table>
<thead>
<tr>
<th>SD #</th>
<th>School District Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>005</td>
<td>Southeast Kootenay</td>
</tr>
<tr>
<td>006</td>
<td>Rocky Mountain</td>
</tr>
<tr>
<td>010</td>
<td>Arrow Lakes</td>
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<tr>
<td>019</td>
<td>Revelstoke</td>
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<tr>
<td>020</td>
<td>Kootenay-Columbia</td>
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<tr>
<td>022</td>
<td>Vernon</td>
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<tr>
<td>023</td>
<td>Central Okanagan</td>
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<tr>
<td>028</td>
<td>Quesnel</td>
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<tr>
<td>033</td>
<td>Chilliwack</td>
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<tr>
<td>034</td>
<td>Abbotsford</td>
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<tr>
<td>035</td>
<td>Langley</td>
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<tr>
<td>037</td>
<td>Delta</td>
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<tr>
<td>038</td>
<td>Richmond</td>
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<td>039</td>
<td>Vancouver</td>
</tr>
<tr>
<td>040</td>
<td>New Westminster</td>
</tr>
<tr>
<td>041</td>
<td>Burnaby</td>
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<tr>
<td>042</td>
<td>Maple Ridge-Pitt Meadows</td>
</tr>
<tr>
<td>043</td>
<td>Coquitlam</td>
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<tr>
<td>044</td>
<td>North Vancouver</td>
</tr>
<tr>
<td>046</td>
<td>Sunshine Coast</td>
</tr>
<tr>
<td>047</td>
<td>Powell River</td>
</tr>
<tr>
<td>048</td>
<td>Sea to Sky</td>
</tr>
<tr>
<td>049</td>
<td>Central Coast</td>
</tr>
<tr>
<td>051</td>
<td>Boundary</td>
</tr>
<tr>
<td>052</td>
<td>Prince Rupert</td>
</tr>
<tr>
<td>053</td>
<td>Okanagan Similkameen</td>
</tr>
<tr>
<td>059</td>
<td>Peace River South</td>
</tr>
<tr>
<td>060</td>
<td>Peace River North</td>
</tr>
<tr>
<td>061</td>
<td>Greater Victoria</td>
</tr>
<tr>
<td>067</td>
<td>Okanagan Skaha</td>
</tr>
<tr>
<td>070</td>
<td>Pacific Rim</td>
</tr>
<tr>
<td>071</td>
<td>Comox Valley</td>
</tr>
<tr>
<td>082</td>
<td>Coast Mountains</td>
</tr>
<tr>
<td>091</td>
<td>Nechako Lakes</td>
</tr>
<tr>
<td>093</td>
<td>Conseil scolaire francophone</td>
</tr>
</tbody>
</table>
MDI Trends over time
Well-being Index
The Well-Being Index

**Optimism**

**Self-Esteem**

**Happiness**

**Absence of Sadness**

**General Health**

**Low Well-Being**
Children who are reporting negative responses on at least 1 measure of well-being.

**Medium to High Well-Being**
Children who are reporting no negative responses, and fewer than 4 positive responses.

**High Well-Being (Thriving)**
Children who are reporting positive responses on at least 4 of the 5 measures of well-being.
There was an overall decline in % of children thriving at each grade level from grades 4 to 8.
#2: Poor Mental Health

“The most recent data released by Statistics Canada revealed that in 2018, 62% of youth aged 15 to 24 had excellent or very good mental health. But that number markedly decreased in the spring of 2020 to 40% in the same age category.

Subsequent research examining changes in youth mental health has shown that depression, particularly among girls, worsened during the pandemic.”
MDI Well-being Index Percent *Thriving*, Grades 4 & 7

Over Time, All BC Participating Districts

Decline in thriving levels from 2015 to 2023 with the steepest decline during the COVID-19 pandemic.
Well-being Index

Component Measure Analysis: Happiness & Sadness
Over time, rates of “happiness” have declined while rates of “sadness” have increased.
MDI, Grade 7, All BC Participating Districts, Over Time Happiness & Sadness by Sex (school registration)

Girls reported lower rates of “happiness” and higher rates of “sadness” than boys.
After considering sex differences, children in lower SES neighbourhoods reported lower levels of “happiness” and higher rates of “sadness”.
Protective factors:
- Peer belonging
- Adult support in school
- School connectedness

Stepwise relationship between additional protective factors reported by children and increases in happiness, reducing the effect of SES on happiness.
Assets Index
The Assets Index

ADULT RELATIONSHIPS
- Adults at School
- Adults in the Neighbourhood
- Adults at Home

PEER RELATIONSHIPS
- Peer Belonging
- Friendship Intimacy

NUTRITION AND SLEEP
- Eating Breakfast
- Meals with Adults at Home
- Frequency of Good Sleep

OUT OF SCHOOL ACTIVITIES
- Organized Activities
As the number of assets in children's environments increase, so too does their well-being.
MDI Assets Index, All BC Participating Districts, Grades 4 & 7

Asset Index, Over Time

<table>
<thead>
<tr>
<th>Grade 4</th>
<th>Grade 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>2019</td>
</tr>
<tr>
<td>2020</td>
<td>2020</td>
</tr>
<tr>
<td>2021</td>
<td>2021</td>
</tr>
<tr>
<td>2022</td>
<td>2022</td>
</tr>
<tr>
<td>2023</td>
<td>2023</td>
</tr>
</tbody>
</table>

- **Adult Relationships**
- **Peer Relationships**
- **Nutrition/Sleep**
- **Out of School Activities**
Any Organized Activity, *Days Per Week, Grade 8*

**OUT-OF-SCHOOL ACTIVITIES**

Children were asked, “In a normal week, outside of school hours, how often do you spend time doing the following activities?”:

**ANY ORGANIZED ACTIVITY**

Children who participated in any out-of-school activity that was structured and supervised by an adult (e.g., educational lessons, youth organizations, music or art lessons and sports practice). Data are reported as the number of times a child participated in any organized activity whether it’s the same or different activities in a week.

![Bar chart showing the frequency of participation in organized activities per week]

- 7+ a week: 30%
- 5-6 a week: 15%
- 3-4 a week: 19%
- 1-2 a week: 18%
- Never: 18%
Spotlight on Self-Reported Gender Identity

Well-being & Asset Index Components 2022/23, Grades 6-8

PhD Student: Maram Alkwaja
What does the research say?

• Children with gender-nonconforming identities sometimes don’t feel safe and accepted in the community.
• Higher rates of bullying, less connection to school, and more absenteeism than cisgender peers.
• YDi 2022/23 (grade 11 students): 4% of youth self-identified as “non-binary” and 2% self-identified “in another way”.
• More research is needed.

26,984 children in grades 6,7 and 8 completed the MDI

4% of those students identified their gender “in another way”
How do children describe their gender identity?
Students who self-identified in another way reported higher levels of sadness and worries than self-identified boys and girls.
Students who self-identified in another way reported lower rates of self-esteem and happiness than self-identified boys and girls.

MDI 2022/23, Grades 6-8, Self-Esteem & Happiness

<table>
<thead>
<tr>
<th></th>
<th>Self-Esteem</th>
<th>Happiness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girl</td>
<td>51.7%</td>
<td>50.6%</td>
</tr>
<tr>
<td>Boy</td>
<td>63.7%</td>
<td>39.0%</td>
</tr>
<tr>
<td>In another way</td>
<td>24.2%</td>
<td>16.2%</td>
</tr>
</tbody>
</table>

Legend:
- High
- Medium
- Low
MDI 2022/23, Grades 6-8, Bullying

Children who self-identified in another way were twice as likely to report experiencing bullying at school.
Self-identified boys and girls were twice as likely to report high levels of belonging at school than students who self-identify in another way.
MDI 2022/23, Grades 6-8, Assets by Well-being
Children Identifying Gender “In Another Way”

% Thriving

Assets Matter

Number of Reported Assets

0% 10% 20% 30% 40% 50% 60% 70%

0 1 2 3 4 5
MDI 2022/23, Grades 6-8, Well-being by School Belonging
Children Identifying Gender “In Another Way”

% Thriving

<table>
<thead>
<tr>
<th>School Belonging</th>
<th>% Thriving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>0%</td>
</tr>
<tr>
<td>Medium</td>
<td>20%</td>
</tr>
<tr>
<td>High</td>
<td>40%</td>
</tr>
</tbody>
</table>
MDI 2022/23, Grades 6-8, Well-being by # of Adults at School
Children Identifying Gender “In Another Way”

% Thriving

# of Supportive Adults at School
Sexual Orientation and Gender Identity (SOGI)

- SOGI 123 is a set of tools and resources for creating a safe, welcoming and inclusive environment for all BC students regardless of sexual orientation or gender identity.
- Introduced in 2016 in BC schools
- Safe, inclusive and accepting schools benefit ALL children.

www.sogieducation.org
MDI Questions:
Climate Concerns
Eco Anxiety

Climate change is happening globally
Constant negative environmental information
Existential threat, uncertainty about the future

Children need to know!
...and they need to feel empowered to climate action

Climate & Environmental Concern Questions

79. Are you concerned about the following environmental issues?

<table>
<thead>
<tr>
<th></th>
<th>No, not at all</th>
<th>Yes, a little</th>
<th>Yes, somewhat</th>
<th>Yes, quite a bit</th>
<th>Yes, very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Climate change (for example, global warming)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>b) Species extinction (when an entire type of animal dies out)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>c) Deforestation (cutting down too much forest)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>d) Pollution (for example, garbage, ocean plastic)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Children in all grades expressed mostly high levels of concern for climate change and pollution in particular.
Half of Canadian youth (48%) aged 16-25 expressed feeling high levels of anxiety about air pollution and climate change, while three-quarters (73%) expressed fear for their future.
Healthy Habits:

- Physical Activity
- Sleep
- Screen Time & Social Media
24 Hour Movement Guidelines

A healthy 24 hours includes:

**SWEAT**
Moderate to vigorous physical activity

An accumulation of at least 60 minutes per day of moderate to vigorous physical activity involving a variety of aerobic activities. Vigorous physical activities, and muscle and bone strengthening activities should each be incorporated at least 3 days per week;

**STEP**
Light physical activity

Several hours of a variety of structured and unstructured light physical activities;

**SLEEP**
Sleep

Uninterrupted 9 to 11 hours of sleep per night for those aged 5-13 years and 8 to 10 hours per night for those aged 14-17 years, with consistent bed and wake-up times;

**SEDENTARY BEHAVIOUR**

- No more than 2 hours per day of recreational screen time
- Limited sitting for extended periods

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Canadian Society for Exercise Physiology: csepguidelines.ca
MDI Questions: Physical Activity
Physical activity is any activity that increases your heart rate and makes you out of breath some of the time. Physical activity can be done in sports, school activities, playing with friends, or walking to school. Some examples of physical activity are running, fast walking, skating, biking, dancing, skateboarding, swimming, soccer, and basketball.

Let’s try to add up all the time you spend in physical activity each day:

**PHYSICAL ACTIVITY**

Children are asked, "In a normal week, how many days are you physically active for a total of at least 60 mins or one hour per day?"

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Everyday</td>
<td>27%</td>
</tr>
<tr>
<td>5–6 days</td>
<td>20%</td>
</tr>
<tr>
<td>3–4 days</td>
<td>25%</td>
</tr>
<tr>
<td>1–2 days</td>
<td>21%</td>
</tr>
<tr>
<td>Never</td>
<td>6%</td>
</tr>
</tbody>
</table>
1/4 of children in grades 6-8 reported that they met the recommended 1+ hours/day of vigorous physical activity everyday.

Children who reported being physically active everyday were more likely to report higher well-being.
Boys reported engaging in physical activity 3+ days per week slightly more than girls.
### Wake up Time

**What time do you usually wake up during the weekdays?**

<table>
<thead>
<tr>
<th>Time</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 6 am</td>
<td>8%</td>
</tr>
<tr>
<td>6 am–7 am</td>
<td>37%</td>
</tr>
<tr>
<td>7 am–8 am</td>
<td>41%</td>
</tr>
<tr>
<td>After 8 am</td>
<td>13%</td>
</tr>
</tbody>
</table>

**What time do you usually go to bed during the weekdays?**

<table>
<thead>
<tr>
<th>Time</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 9 pm</td>
<td>5%</td>
</tr>
<tr>
<td>9 pm–10 pm</td>
<td>26%</td>
</tr>
<tr>
<td>10 pm–11 pm</td>
<td>31%</td>
</tr>
<tr>
<td>11 pm–12 am</td>
<td>20%</td>
</tr>
<tr>
<td>After 12 am</td>
<td>17%</td>
</tr>
</tbody>
</table>
MDI 2022/23, Grades 6-8, # Hours Sleep/Night

Younger children are more likely to meet the recommended 9-11 hours of sleep per night than older children.
Just over half of children in grades 6-8 reported that they get a “good night’s sleep” 5+ days/week.

Children who reported having a good night’s sleep more often were more likely to report higher well-being.
MDI 2022/23, Grades 6-8, Sleep

Girls are less likely to report getting a “good night’s sleep” 5+ days/week than boys.
MDI Questions: Screen Time & Social Media
Screen Time

Changed Screen time questions from # hours after school -> # hours per day
And, added a new social media question for grades 6,7,8

In a normal week, how many hours per day do you...

a) ... sit and watch TV, movies, or videos including YouTube
b) ... play video or computer games
c) ... hang out with friends on the phone, tablet or computer (for example, video call, text messaging)

Grade 6,7,8 only:
a) ... spend on social media sites or apps, such as Instagram, Snapchat, Twitter, Facebook, TikTok either browsing or posting
Over 1/3 of children in grades 6-8 reported using social media more than 2 or more hours/day.

Children who reported using social media 2+ hours/day were more likely to report lower levels of thriving.
MDI 2022/23, Grades 6-8, % Thriving by Screen Time

- Overall, higher levels of screen time were related to lower levels of thriving.
- Goldilocks effect: for almost all types of screen time, a little bit of usage was better for thriving than no usage.
- For social media, any time reported using social media was negatively related to thriving compared to no usage.
Older children reported using social media more time each day than younger children. Girls reported spending more time on social media than boys.
Unequal effects of different types of screen time

MDI 2022/23, Grades 6-8, Healthy Habits: Good Sleep + Low Social Media Use + Physically Active

1/3 of children reported healthy habits that met recommendations regarding sleep, physical activity, and screen time.

Meeting recommendations for more healthy habits was related to increased thriving.
Questions
New Data Dashboards

EDI Data Dashboard: dashboard.earlylearning.ubc.ca

MDI Data Dashboard: mdi.dashboard.earlylearning.ubc.ca
Data in Action
Discover MDI

A Field Guide to Well-Being in Middle Childhood

Guiding your journey to support children's well-being using Middle Years Development Instrument data

Begin your Journey  View Top Resources
Exploring the data with others is an **ACTION**!

- School administrators, teachers, staff
- Youth
- Community partners & networks
- Health authority & government partners
- Parents & Caregivers

Promote **shared responsibility** for children and families across systems and sectors.
Children’s Voices Matter

One of the core beliefs underlying the Middle Years Development Instrument (MDI) is that children’s voices matter. Asking children for their input can be powerful because it provides rich data on child well-being that would not otherwise be accessible if we did not ask them – data that can be used to create environments and interactions which can promote children’s well-being. It also tells children that their thoughts and feelings are valued and provides them a say in how their schools and communities should support them.
Focus on Assets

• Nurture positive relationships – with adults, with peers
• Out of school activities – inclusive, low barrier/low cost
• Provide opportunities to be physically active and connect IRL
• Climate & community related activities and actions – help children get involved
• Work towards safe and inclusive school/community environments for all kids.
Get Outside!

New Resource for Educators

Bring your class outside!

Go to the Tool
Go to OutsidePlay.org

Outdoor Play and Learning

This tool is designed for elementary school teachers. There are four themes to explore which offer valuable insights and hands-on resources to begin locating play and learning outdoors.

teacher.outsideplay.org
Accessing Indigenous Data
Thank You!

discovermdi.ca
earlylearning.ubc.ca/mdi
mdi@help.ubc.ca