



SCHOOL DISTRICT 23 | **CENTRAL OKANAGAN**

# SCHOOL DISTRICT REPORT

2023/2024



# ACKNOWLEDGEMENTS

We express our deep gratitude to the xʷməθkʷəy̓əm (Musqueam) Nation for the privilege of working on their traditional, ancestral and unceded territory at the Point Grey Campus of the University of British Columbia.

The Middle Years Development Instrument (MDI) project is made possible with funding from BC school districts and school boards across the country. We would like to thank and acknowledge all participating schools for their support of and collaboration towards this project.

We are grateful to the teachers, education staff and school administrators who work directly with us to gather data and use our reports. This includes a commitment to training and completing questionnaires, engaging with students, parents and caregivers and using HELP's data and research in schools, districts and communities. We also extend our warmest appreciation to the students who take the time to share their experiences with us. Thank you.

## MDI RESEARCH LEAD

HELP's Middle Years research is led by Dr. Eva Oberle. HELP acknowledges Dr. Oberle for her leadership and expertise in social and emotional development research, her dedication to exploring children's experiences in the middle years, and for raising the profile of children's voices. HELP also acknowledges the contributions of Dr. Kimberly Schonert-Reichl and her expertise in the area of social and emotional learning to the development and implementation of the MDI.

# ABOUT THE HUMAN EARLY LEARNING PARTNERSHIP

The Human Early Learning Partnership (HELP) is an interdisciplinary research centre based at the School of Population and Public Health, Faculty of Medicine, at the University of British Columbia. HELP's unique partnership brings together researchers and practitioners from across BC, Canada and internationally to address complex child development issues. HELP's research projects explore how different environments and experiences contribute to health and social inequities in children's development over their life course.

The centre was founded by Drs. Clyde Hertzman and Hillel Goelman in 1999. Clyde's vision for HELP was to advance knowledge about child development and importantly, to apply this knowledge in communities. This report, and the work of HELP over two decades, would not have been possible without his vision and passion.

To learn more please visit our website at [earlylearning.ubc.ca](http://earlylearning.ubc.ca) (<http://earlylearning.ubc.ca/>).

## ***Suggested Citation***

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Vancouver, BC: University of British Columbia, School of Population and Public Health; **May 2024.**

Version: 2.1.0

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# INTRODUCTION TO THE MDI

## WHY THE MIDDLE YEARS MATTER

Experiences in the middle years, especially between the ages of 10 to 13, have critical and long lasting effects. They are powerful predictors of adolescent adjustment and future success. During this time, children are experiencing significant cognitive, social and emotional changes that establish their lifelong identity and set the stage for adolescence and adulthood. The overall health and well-being of children in their middle years affects their ability to concentrate and learn, develop and maintain friendships and make thoughtful decisions.

During the late middle childhood years (also referred to as early adolescence), children have an increased awareness of themselves and others. During middle childhood they are developing ideas about how they may or may not "fit in" to their social and academic environments (Rubin et al., 2006). These ideas have the power to either promote health and academic achievement or lead to negative outcomes such as depression and anxiety in adulthood (Jacobs et al., 2008). Although middle childhood is a time of risk, it is also a time of opportunity. There is mounting evidence to suggest that positive relationships to adults and peers during this critical time act to increase a child's resiliency and school and life success.

## WHAT IS THE MIDDLE YEARS DEVELOPMENT INSTRUMENT?

The Middle Years Development Instrument (MDI) is a self-report questionnaire that asks children in Grade 4 to Grade 8 about their thoughts, feelings and experiences in school and in the community. It is a unique and comprehensive questionnaire that helps us gain a deeper understanding of how children are doing at this stage in their lives. Researchers working at the Human Early Learning Partnership (HELP) are using results to learn more about children's social-emotional health and well-being. In addition, the MDI is being used across sectors to support collaboration and inform policy and practice.

The MDI uses a strengths-based approach to assess five areas of development that are strongly linked to well-being, health and academic achievement. In addition, the MDI focuses on highlighting the promotive and protective factors and assets that are known to support and optimize development in middle childhood. These areas are: *Social and Emotional Development*, *Physical Health and Well-being*, *Connectedness*, *Use of Out-of-School Time* and *School Experiences*. Each of these dimensions is made up of several measures. Each measure is made up of one or more individual questions.

Combining select measures from the MDI helps us paint a more comprehensive portrait of children's overall well-being and the assets that contribute to their healthy development. The results for key MDI measures are summarized by two indices: The Well-being Index and the Assets Index.

The following illustrates the relationship between MDI dimensions and measures, and highlights which measures contribute to the Well-being and Assets Indices.

**LEGEND**

- A measure in the Well-being Index
- A measure in the Assets Index
- \* A measure or item in the Grade 6, 7 and 8 MDI only



**SOCIAL & EMOTIONAL DEVELOPMENT**

Measures & Items

- |   |   |   |
|---|---|---|
| ○ <b>Optimism</b><br>Empathy<br>Prosocial Behaviour | ○ <b>Happiness</b><br>○ <b>Absence of Sadness</b><br>Absence of Worries<br>Self-Regulation (Short-Term) | * Responsible Decision-Making<br>* Self-Awareness<br>* Citizenship/Social Responsibility<br>Concern for the Environment |
| ○ <b>Self-Esteem</b>                                |   |   |



**PHYSICAL HEALTH & WELL-BEING**

Measures & Items

- |   |                                  |                                       |
|---|----------------------------------|---------------------------------------|
| ○ <b>General Health</b>                   | Physical Activity                | Help-Seeking for Emotional Well-being |
| ■ <b>Eating Breakfast</b>                 | Wake-up and Bed time             | Transportation To and From School     |
| ■ <b>Meals with Adults in Your Family</b> | ■ <b>Frequency of Good Sleep</b> |                                       |
| Food                                      |                                  |                                       |



**CONNECTEDNESS**

Measures & Items

- |                                      |                              |                  |
|--------------------------------------|------------------------------|------------------|
| ■ <b>Adults at School</b>            | ■ <b>Adults at Home</b>      | Important Adults |
| ■ <b>Adults in the Neighbourhood</b> | ■ <b>Peer Belonging</b>      |                  |
|                                      | ■ <b>Friendship Intimacy</b> |                  |



**USE OF OUT-OF-SCHOOL TIME**

Measures & Items

- |                                     |                       |   |
|-------------------------------------|-----------------------|---|
| ■ <b>Organized Activities</b>       | ○ Youth Organizations | How Children Spend their Time<br>After School Places<br>Children's Wishes |
| ○ Educational Lessons or Activities | ○ Sports              |   |
|                                     | ○ Music or Arts       |   |



**SCHOOL EXPERIENCES**

Measures & Items

- |                       |                            |
|-----------------------|----------------------------|
| Academic Self-Concept | School Belonging           |
| School Climate        | Victimization and Bullying |

For more information on all of the measures, including questions, response options and scoring for the MDI results found in this report, please refer to the [MDI Companion Guide](https://www.discovermdi.ca/resources/mdi-companion-guide/). For additional resources visit, the [Discover MDI Field Guide](https://www.discovermdi.ca/category/mdi-essentials/).

## CONNECTING THE MDI WITH THE PERSONAL AND SOCIAL COMPETENCIES OF THE BC CURRICULUM

Your MDI data provide a unique approach to understanding children’s social and emotional development and well-being in relation to the [BC Ministry of Education’s Personal and Social Competencies \(https://curriculum.gov.bc.ca/competencies\)](https://curriculum.gov.bc.ca/competencies).

Areas measured by the MDI reflect facets of the “Personal and Social Competency” domain of BC’s Curriculum, providing valuable information for understanding children’s growth and progress within this core competency. The MDI questions provide an opportunity for students to self-assess and reflect on their social and personal competency, including reflecting on MDI concepts, questions and results.



### PERSONAL & SOCIAL COMPETENCIES

#### Positive Personal & Cultural Identity

##### Related MDI Measures:

- Connectedness to Adults at Home, School and Community
- Peer Belonging
- Friendship Intimacy
- Empathy
- School Belonging
- School Climate
- Self-Esteem
- Academic Self-Concept
- Self-Awareness
- Responsible Decision-Making

#### Personal Awareness & Responsibility

##### Related MDI Measures:

- Academic Self-Concept
- Self-Esteem
- Self-Regulation
- General Health
- Optimism
- Self-Awareness
- Responsible Decision-Making
- Use of Out-of-School Time

#### Social Responsibility

##### Related MDI Measures:

- Citizenship and Social Responsibility
- Prosocial Behaviour
- Empathy
- School Climate
- Connectedness to Adults at School
- Connectedness to Peers
- Self-Regulation

# ABOUT THIS REPORT

## HOW THE RESULTS ARE REPORTED

School district data in this report includes all children who participated within the public school district in 2023/2024. Administration of the MDI took place between the months of January to March 2024.

School district data are compared to the **average for all schools**, which includes children from all participating schools in the province. Districts with large populations contribute more in computing the **average for all schools** than districts with smaller populations. Results for large districts tend to be closer to the average for all schools. Please see the table below for a list of participating districts, and note that the average is based on participating schools and **does not** represent all schools in the entire province.

**Suppression.** Data are not publicly available when there are fewer than 35 children, for confidentiality reasons. The data are also suppressed when the uncertainty of the results (i.e., margin of error) is greater than 10%, which can result from low coverage particularly in areas with small populations. The data in this report have been rounded. Many questions on the MDI allow children to provide multiple responses. Totals for some measures and questions may not equal 100%.

#	School District	# of Children	Participation Rate
5	Southeast Kootenay	389	91%
6	Rocky Mountain	230	86%
10	Arrow Lakes	40	82%
19	Revelstoke	97	92%
22	Vernon	599	88%
23	Central Okanagan	1,627	86%
34	Abbotsford	1,294	84%
36	Surrey	4,055	68%
37	Delta	882	82%
40	New Westminster	568	95%
42	Maple Ridge-Pitt Meadows	1,111	92%
46	Sunshine Coast	237	85%
47	Powell River	137	51%
48	Sea to Sky	401	90%
49	Central Coast	14	93%
50	Haida Gwaii	22	73%
59	Peace River South	219	70%
60	Peace River North	391	82%
67	Okanagan Skaha	340	85%
71	Comox Valley	546	71%
75	Mission	400	76%
81	Fort Nelson	31	67%

#

School District

# of Children

Participation Rate

All Participating Schools

13,926

## UNDERSTANDING MDI DATA

The **MDI Companion Guide** provides information on all of the measures, including questions, response options and scoring, for the MDI results found in this report. The guide is available to [download here \(https://www.discovermdi.ca/resources/mdi-companion-guide/\)](https://www.discovermdi.ca/resources/mdi-companion-guide/).

For more information on the MDI, including answers to common questions such as, what is the MDI; why use the MDI and how to use the MDI, visit the [Discover MDI Field Guide \(https://www.discovermdi.ca/\)](https://www.discovermdi.ca/).





# 2023/2024 RESULTS FOR CENTRAL OKANAGAN

## DEMOGRAPHICS

Population		Gender Identity	
Total Sample	1627	Boys	52%
Participation Rate	86%	Girls	48%
		Non-binary	2%
		In Another Way	1%
<b>Languages Spoken at Home</b>			
First Nations, Inuit or Métis	1%	Mandarin	1%
Cantonese	1%	Punjabi	3%
English	93%	Spanish	3%
French	5%	Filipino/Tagalog	2%
Hindi	1%	Vietnamese	1%
Japanese	1%	Other	9%
Korean	1%		

**Total Sample:** Refers to the total number (#) of children represented in this report. Children are included in the sample if they complete a question and the data are reported.

**Participation Rate:** Refers to the percentage of the Grade 5 population that participated in the MDI survey this year.

**Gender Identity:** Children are asked to describe their gender as "Boy," "Girl," "Non-binary" or "In another way." Children may choose not to answer the question at all. Children are able to select more than one response and therefore, in some cases, percentages may not add to 100%. Data are suppressed where fewer than 5 children selected the response.

**Languages Spoken at Home:** Children are able to select more than one language spoken at home.

**First Nations, Inuit or Métis Languages:** If a child selects "First Nations, Inuit or Métis" as a language spoken in the home, they are then asked to identify, if possible, the specific language. First Nations, Inuit or Métis language data are not publicly available.

**Other:** A limited selection of languages is offered on the MDI questionnaire. The "Other" category gives children an opportunity to enter their own response(s).

# WELL-BEING & ASSETS INDICES

Combining select measures from the MDI helps us paint a more comprehensive portrait of children’s overall well-being and the assets that contribute to their healthy development. The results for key MDI measures are summarized by two indices. This section of the report focuses on results for the Well-being Index and the Assets Index. Learn more about the important relationship between individual measures, the Well-being Index and the Assets Index in the [Discover MDI Field Guide](https://www.discovermdi.ca/intro-to-mdi-dimensions-and-indices/) (<https://www.discovermdi.ca/intro-to-mdi-dimensions-and-indices/>).

## WELL-BEING INDEX

The Well-being Index combines MDI measures relating to children’s physical health and social and emotional development that are of critical importance during the middle years. These are: Optimism, Happiness, Self-Esteem, Absence of Sadness and General Health.

- MEASURES**
- Optimism
  - Happiness
  - Self-Esteem
  - Absence of Sadness
  - General Health

Scores from these five measures are combined and reported by three categories of well-being, providing a holistic summary of children’s mental and physical health.



**High Well-being (Thriving)**  
Children who score in the high range on at least 4 of the 5 measures of well-being and have no low-range scores.

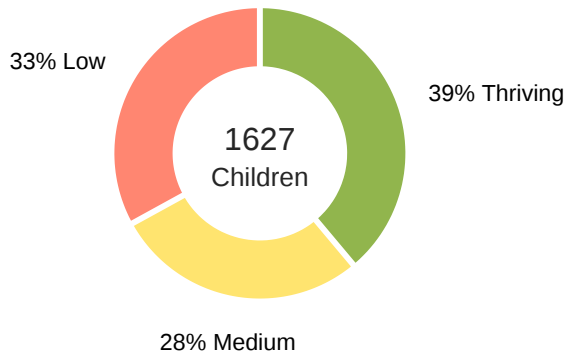


**Medium Well-being**  
Children who score in the high range on fewer than 4 of the 5 measures of well-being, and have no low-range scores.

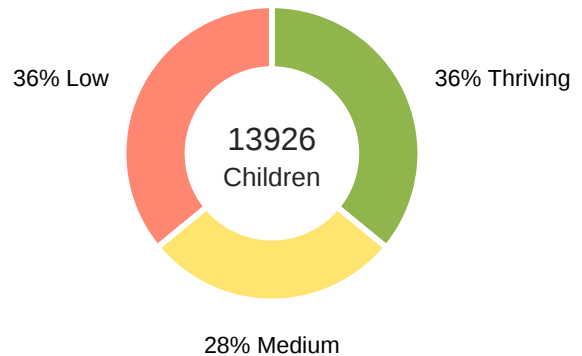


**Low Well-being**  
Children who score in the low range on at least 1 of the 5 measures of well-being.

### CENTRAL OKANAGAN



### ALL PARTICIPATING SCHOOLS



## ASSETS INDEX

The Assets Index combines MDI measures that highlight four key assets that help to promote children’s positive development and well-being. Assets are positive experiences, relationships or behaviours present in children’s lives. Assets are considered actionable, meaning that schools and communities can focus their efforts in these areas to create the conditions and contexts where children can thrive.

**Notes:**

In the 2022/23 reporting year, the MDI questionnaire was changed to ask children about their activities outside of school hours. In previous years, children were asked about their activities only during the hours of 3 pm to 6 pm on school days. As a result, the Out-of-School Activities Asset data are not comparable to the After-School Activities Asset data from previous years.

School Experiences are also considered to be an asset that contribute to children's well-being; however, this asset is not reported as part of the Assets Index to prevent the ranking of individual schools or sites. Please refer to the School Climate and Bullying and Victimization measures for data related to this asset.



**ADULT RELATIONSHIPS**

Adults at School  
Adults in the Neighbourhood  
Adults at Home



**PEER RELATIONSHIPS**

Peer Belonging  
Friendship Intimacy



**NUTRITION & SLEEP**

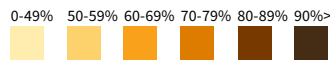
Eating Breakfast  
Meals with Adults in Your Family  
Frequency of Good Sleep



**OUT-OF-SCHOOL ACTIVITIES**

Organized Activities

Percentage of children reporting the presence of an asset



**CENTRAL OKANAGAN**

**82%**  
Adult Relationships



**88%**  
Out-of-School Activities

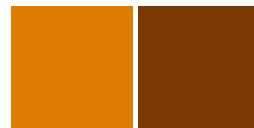
**82%**  
Peer Relationships



**63%**  
Nutrition & Sleep

**ALL PARTICIPATING SCHOOLS**

**79%**  
Adult Relationships



**88%**  
Out-of-School Activities

**80%**  
Peer Relationships



**63%**  
Nutrition & Sleep



# SOCIAL & EMOTIONAL DEVELOPMENT

Social and emotional competence is integral to children’s social and emotional development and includes the ability to understand and manage emotions, develop caring and empathy for others, establish positive relationships, make responsible decisions, and handle challenging situations effectively (Weissberg et al., 2015). Promoting children’s social and emotional competence is critical for their successful development across the lifespan (Jones et al., 2015). For example, social and emotional competence is associated with greater motivation and success in school (Mahoney et al., 2020), as well as positive outcomes later in life, such as earning a college degree, finding stable employment, engaging in a healthy lifestyle, and psychological well-being (Domitrovich et al., 2017). Social and emotional competencies can be best promoted when children experience supportive environments across multiple contexts—at school with teachers and peers, in the home with elders, family, or caregivers, and in after-school programs with peers and community members.

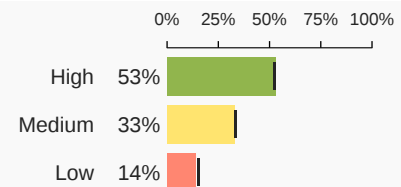
Detailed information on the MDI survey questions and response scales for Social and Emotional Development are available in the [Discover MDI Field Guide \(https://www.discovermdi.ca/social-emotional-development/\)](https://www.discovermdi.ca/social-emotional-development/).

## RESULTS FOR CENTRAL OKANAGAN

| Average for all Schools

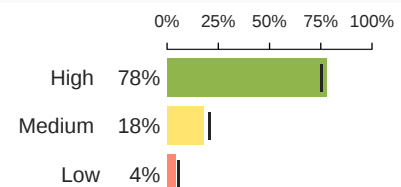
### OPTIMISM

Optimism refers to the mindset of having positive expectations for the future. e.g., "I have more good times than bad times."



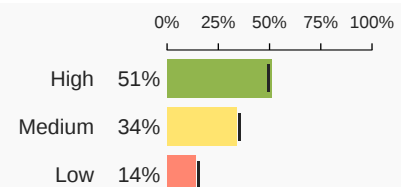
### EMPATHY

Empathy is the experience of understanding and sharing the feelings of others. e.g., "I care about the feelings of others."



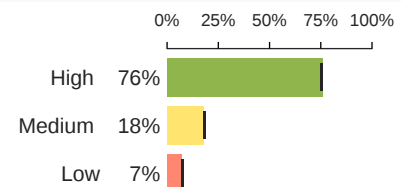
### PROSOCIAL BEHAVIOUR

Prosocial behaviour refers to actions that benefit others. e.g., "I helped someone who was hurt."



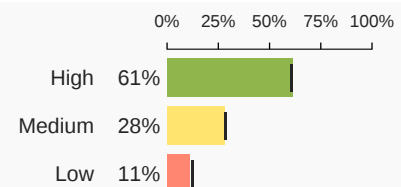
### SELF-ESTEEM

Self-esteem refers to a person's sense of self-worth. e.g., "A lot of things about me are good."



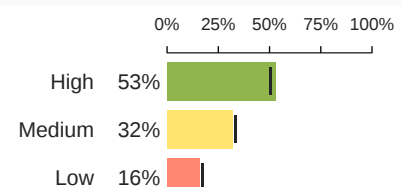
### HAPPINESS

Happiness refers to how content or satisfied children are with their lives. e.g., "I am happy with my life."



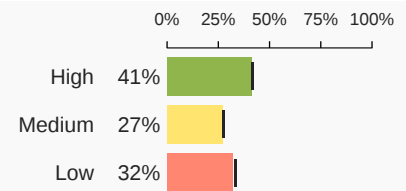
### ABSENCE OF SADNESS

Sadness measures the beginning symptoms of depression. e.g., "I feel unhappy a lot of the time."



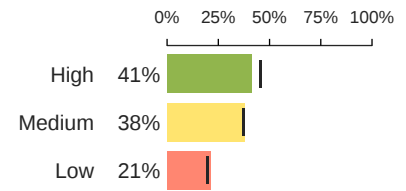
## ABSENCE OF WORRIES

Worries measure the beginning symptoms of anxiety. e.g., "I worry a lot that other people might not like me."



## SELF-REGULATION (SHORT-TERM)

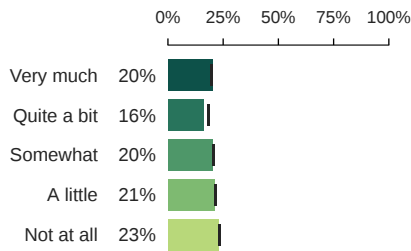
Short-term self-regulation is about impulse control. It requires adapting behaviour or emotions to meet an immediate goal. e.g., "I can calm myself down when I'm excited or upset."



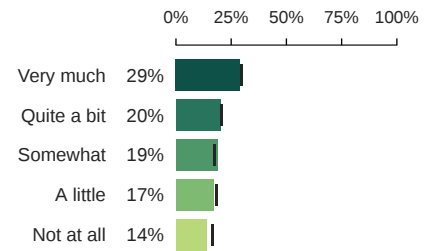
## CONCERN FOR THE ENVIRONMENT

### ARE YOU CONCERNED ABOUT THE FOLLOWING ENVIRONMENTAL ISSUES?

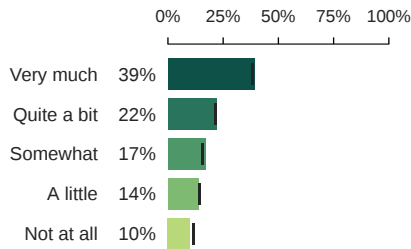
#### CLIMATE CHANGE



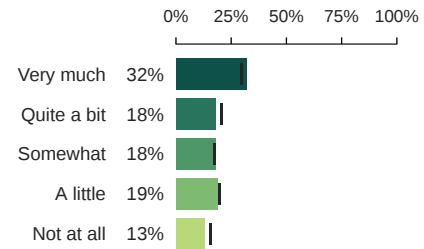
#### DEFORESTATION



#### POLLUTION



#### SPECIES EXTINCTION



## RESEARCH HIGHLIGHTS

### SOCIAL AND EMOTIONAL DEVELOPMENT

Social and emotional competencies include children's ability to recognize, understand, and effectively respond to emotions, manage stress and be optimistic. They also include showing concern for others, sustaining healthy relationships and making effective personal and social decisions (Weissberg, Durlak, Domitrovitch, & Gullota, 2015).

Middle childhood is an important time for promoting self-regulation and problem-solving strategies to help children persevere in the face of obstacles and setbacks. Related skills and strategies learned during middle childhood tend to stick with children throughout the rest of their lives (Skinner et al., 2016).

Children may learn about climate change in schools and in the media, and also may be experiencing extreme weather events in many communities. While it is important for children and youth to be aware of climate change, there can be mental health impacts such as feeling worried and powerless. Being in nature and participating in climate action may promote positive mental health (Gunarati et al., 2022).



# PHYSICAL HEALTH & WELL-BEING

Promoting children’s physical health and well-being in the middle years lays the foundation for a healthy lifestyle. Physical health outcomes are not uniquely controlled by genetics. They can also be influenced by external factors such as family relationships, connections with peers, and larger economic and social conditions (Hertzman, C., & Boyce. T., 2010). Children who feel healthy are more likely to be engaged in school, feel a connection to their teachers, perform better academically, and are less likely to be bullied or bully others (Forrest et al., 2013). Being physically active also promotes children’s mental health (Moeijes et al., 2018). Children benefit from guidance and opportunities that support the development of healthy habits - such as regular physical activity, quality sleep and healthy meals - that they can carry forward into adolescence and adulthood.

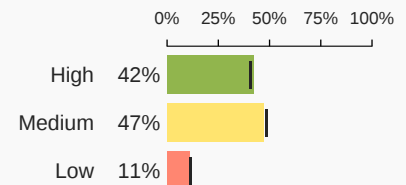
Detailed information on the MDI survey questions and response scales for Physical Health and Well-being are available in the [Discover MDI Field Guide \(https://www.discovermdi.ca/physical-health-well-being/\)](https://www.discovermdi.ca/physical-health-well-being/).

## RESULTS FOR CENTRAL OKANAGAN

| Average for all Schools

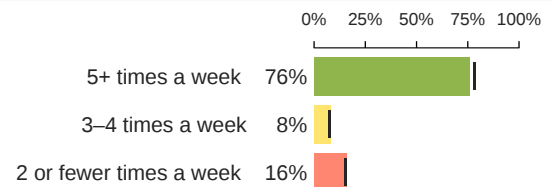
### GENERAL HEALTH

Children are asked, "In general, how would you describe your health?"



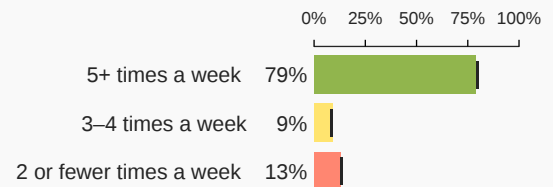
### EATING BREAKFAST

Children are asked, "How often do you eat breakfast?"



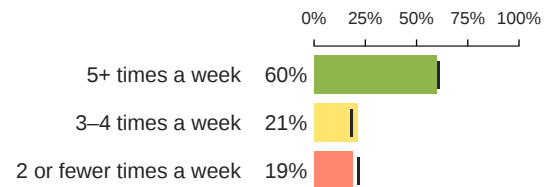
### MEALS WITH ADULTS IN YOUR FAMILY

Children are asked, "How often do your parents or other adult family members eat meals with you?"



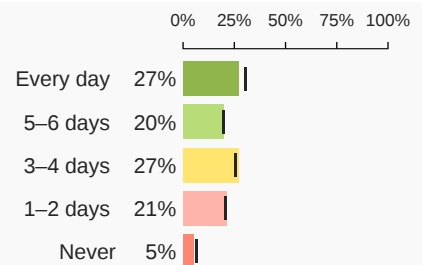
### FREQUENCY OF GOOD SLEEP

Children are asked, "How often do you get a good night's sleep?"



### 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?"





### WHAT TIME DO YOU USUALLY WAKE UP DURING THE WEEKDAYS?

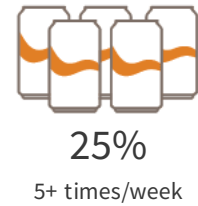
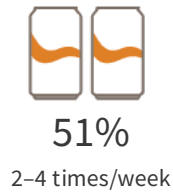
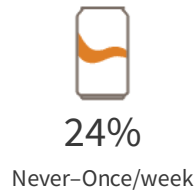
Before 6 am	12%
6 am–7 am	47%
7 am–8 am	32%
After 8 am	9%



### WHAT TIME DO YOU USUALLY GO TO BED DURING THE WEEKDAYS?

Before 9 pm	39%
9 pm–10 pm	40%
10 pm–11 pm	11%
11 pm–12 am	4%
After 12 am	6%

### HOW OFTEN DO YOU EAT FOOD LIKE POP, CANDY, POTATO CHIPS, OR SOMETHING ELSE?



### HELP-SEEKING FOR EMOTIONAL WELL-BEING

#### WHO WOULD YOU TALK TO IF YOU WERE FEELING SAD, STRESSED, OR WORRIED?

Examples provided include a teacher, school counselor, parent, grandparent, older sibling or cousin, elder, after-school program staff, doctor, nurse etc. (Children can select all of the options that apply; therefore, percentages may not total 100%.)

An adult at school	40%
A family member	84%
An adult in my community	16%
A health professional	25%
My friend(s)	64%
Don't know who to talk to	9%
Prefer to handle it on my own	20%
Talk to someone else (someone not on this list)	10%

## TRANSPORTATION TO AND FROM SCHOOL

Children are asked, “How do you usually get to school?”; “How do you usually get home from school?” and “If you could choose, how would you wish to get to and from school?”

	To School	From School	Wish
Car	62%	54%	40%
School bus	13%	14%	13%
Public transportation (public bus, train or ferry)	1%	2%	4%
Walk	20%	26%	19%
Cycle, skateboard, scooter or rollerblade	3%	3%	16%
Something else	1%	2%	9%



### RESEARCH HIGHLIGHTS PHYSICAL HEALTH & WELL-BEING

*Eating meals together as a family often is related to increased self-esteem and school success, and decreased chance of eating disorders, substance abuse, violent behaviour and symptoms of depression (Harrison et al., 2015).*

*Seeking help for emotional support from appropriate and effective resources, such as school adults, parents and family members, health professional, and counsellors, can help promote positive mental health and resilience, and serve as a protective factor for mental illness (Rickwood et al., 2005; Xu et al., 2018).*

*Children ages 5 to 13 need 9–11 hours of uninterrupted sleep a night (Hirshkowitz et al., 2015). When children do not get enough sleep they are more likely to have troubles at school, be involved in family disagreements and display symptoms of depression (Smaldone, Honig, & Byrne, 2007).*

*Regular physical activity is linked to better academic outcomes, higher self-esteem, well-being and self-concept (Andermo et al., 2020).*

*Because of changes in the brain that take place around the time of puberty, children are more strongly attracted to junk foods that contain high amounts of fat and sugar than adults (Reichelt, 2016).*



Belonging is a fundamental need for everyone. Feeling a sense of connectedness to family, peers, school, and community is one of the most important assets for a child’s well-being, health, and success in life (Masten, 2018; Thomson et al., 2018). Research shows that children with positive peer relationships feel better about themselves, experience greater mental health, are more prosocial, and perform better academically (Wentzel, 1998). A single caring adult, be it a family member, coach, teacher, an elder, or a neighbour, can positively influence a child’s life and promote resilience (Werner, 2004). Children’s life satisfaction is related to their sense of belonging with peers and their supportive relationships with adults even more so than family income or personal health (Gadermann et al., 2015; Oberle et al., 2014). This is true across cultures (Emerson et al., 2018). For children, connectedness to land, language, and culture also can play an important role in encouraging a strong and healthy sense of identity (First Nations Information Governance Centre, 2016).

Detailed information on the MDI survey questions and response scales for Connectedness is available in the [Discover MDI Field Guide](https://www.discovermdi.ca/connectedness/) (<https://www.discovermdi.ca/connectedness/>).

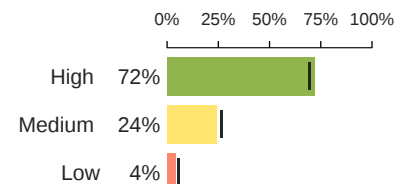
## RESULTS FOR CENTRAL OKANAGAN

| Average for all Schools

### CONNECTEDNESS WITH ADULTS

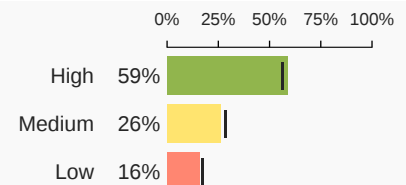
#### ADULTS AT SCHOOL

Assesses the quality of relationships children have with the adults they interact with at school. e.g., "At my school there is an adult who believes I will be a success."



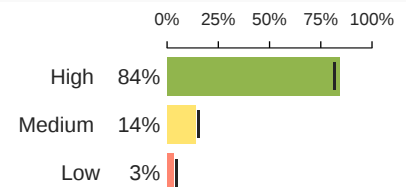
#### ADULTS IN THE NEIGHBOURHOOD/COMMUNITY

Assesses the quality of relationships children have with the adults they interact with in their neighbourhood or community. e.g., "In my neighbourhood/community there is an adult who really cares about me."



#### ADULTS AT HOME

Assesses the quality of relationships children have with the adults in their home. e.g., "In my home there is a parent or other adult who listens to me when I have something to say."



### NUMBER OF IMPORTANT ADULTS AT SCHOOL



2 or more

71%



One

11%



None

19%

Average for all Schools

67%

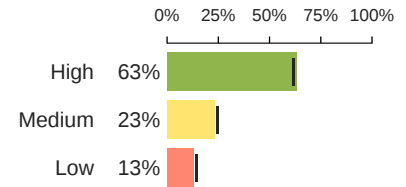
10%

23%

## CONNECTEDNESS WITH PEERS

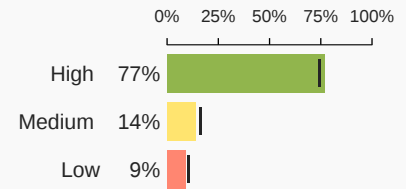
### PEER BELONGING

Measures children's feelings of belonging to a social group. e.g., "When I am with other kids my age, I feel I belong."



### FRIENDSHIP INTIMACY

Assesses the quality of relationships children have with their peers. e.g., "I have a friend I can tell everything to."



### RESEARCH HIGHLIGHTS CONNECTEDNESS

*Connectedness with peers has been associated with higher levels of life satisfaction and self-esteem, lower levels of depressive symptoms, and better educational outcomes in early adolescence (Arslan et al., 2018; Oberle et al., 2018).*

*Strong social connections in adolescence are a better predictor of well-being in adulthood than their academic achievement (Olsson, 2013).*

*For younger students during elementary and middle school years, a nurturing and caring relationship with a classroom teacher is vital. Connections with warm and accepting teachers enhance emotional well-being, increase motivation, engagement and success in school for children in early adolescence. They are also buffers for children who are experiencing mental health problems (Oberle, 2018).*

*Social competencies and friendship-building skills can buffer children against bullying, anxiety and depression (Guhn et al., 2013).*



# USE OF OUT-OF-SCHOOL TIME

Children’s involvement in activities outside of school hours exposes them to important social environments. Out-of-school activities, such as art and music classes, sports leagues, and community groups provide distinct experiences that help children to build relationship and social and emotional skills (Vandell et al., 2020). Children who participate in structured extracurricular activities experience school success and are less likely to drop out of school (Thouin et al., 2020). A healthy balance of structured out-of-school programs, social opportunities, physical activity, play, and rest are all important experiences that promote children’s thriving and resilience (Immordino-Yang et al., 2019; Linver et al., 2009).

Detailed information on the MDI survey questions and response scales for Use of Out-of-School Time is available in the [Discover MDI Field Guide](https://www.discovermdi.ca/use-of-out-of-school-time/) (<https://www.discovermdi.ca/use-of-out-of-school-time/>).

## RESULTS FOR CENTRAL OKANAGAN

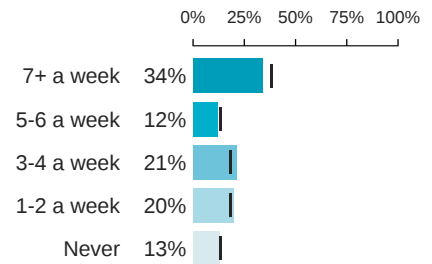
| Average for all Schools

### 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?”:

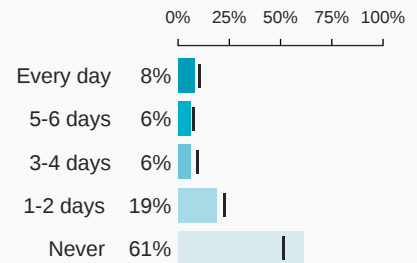
#### ANY ORGANIZED ACTIVITY

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.



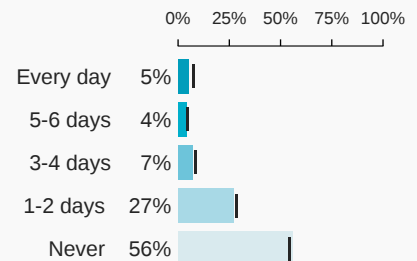
#### EDUCATIONAL LESSONS OR ACTIVITIES

For example: Tutoring, attending a math school, foreign language lessons, or some other academic related activity.



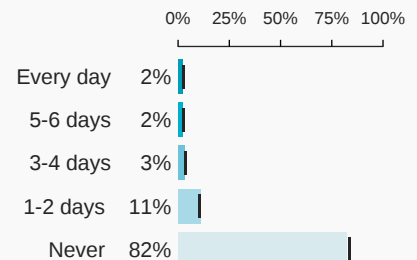
#### MUSIC OR ART LESSONS

For example: Drawing or painting classes, musical instrument lessons or some other activity related to music or art.



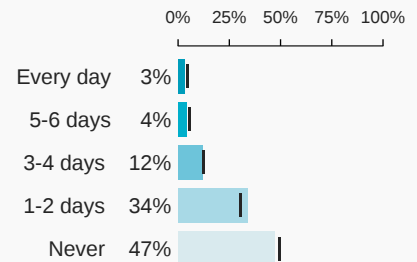
#### YOUTH ORGANIZATIONS

For example: Scouts, Girl Guides, Boys and Girls Clubs, or some other group organization.



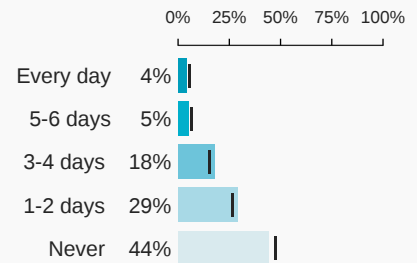
## INDIVIDUAL SPORTS (WITH A COACH OR INSTRUCTOR)

For example: Swimming, dance, gymnastics, ice skating, tennis or another individual sport.



## TEAM SPORTS (WITH A COACH OR INSTRUCTOR)

For example: Basketball, hockey, soccer, football, or another team sport.

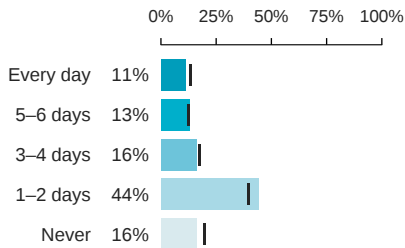


## HOW CHILDREN SPEND THEIR TIME

Children were asked how they spend their time outside of school hours, in a normal week.

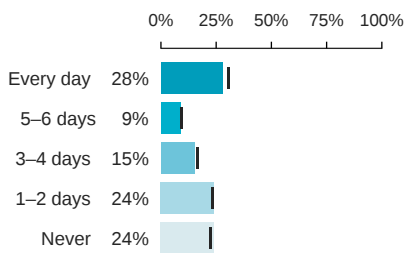
### SOCIALIZING WITH FRIENDS

#### HANG OUT WITH FRIENDS IN PERSON

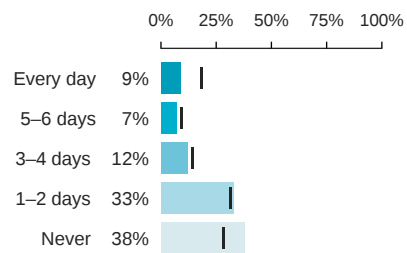


### READING & HOMEWORK

#### READ FOR FUN

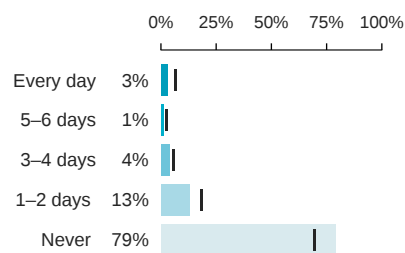


#### DO HOMEWORK

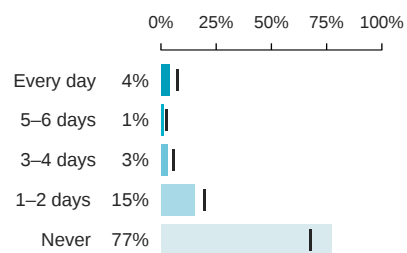


### ACTIVITIES

#### CULTURAL ACTIVITIES

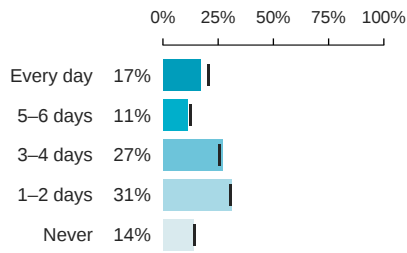


#### RELIGIOUS, SPIRITUAL OR FAITH-BASED ACTIVITIES

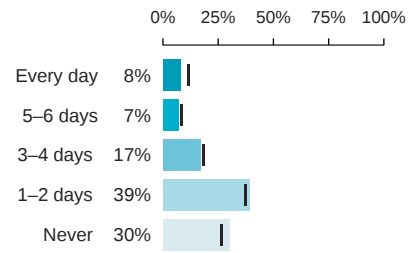


## SPORTS

### PLAY SPORTS OR EXERCISE FOR FUN



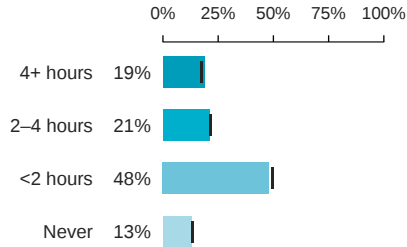
### PLAY AT PARK, PLAYGROUND OR IN THE NEIGHBOURHOOD



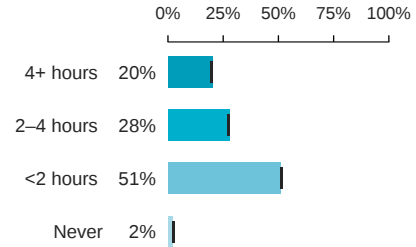
## SCREEN TIME

Children were asked how many hours per day they spent doing activities on a screen in a normal week.

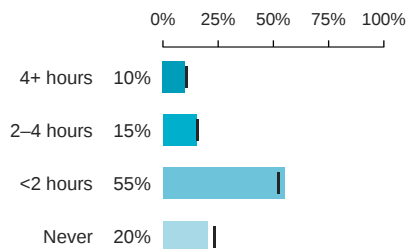
### VIDEO OR COMPUTER GAMES



### WATCH TV, NETFLIX, YOUTUBE OR SOMETHING ELSE



### USE A PHONE OR INTERNET TO TEXT OR CHAT WITH FRIENDS



## WHAT CHILDREN WISH TO BE DOING



Children were asked to think about activities they want to do outside of school.

**I am already doing the activities I want to be doing**

**78%**

**I wish I could do additional activities**

**31%**

**I am doing some of the activities I want, but I wish I could do more**

**9%**

Children who wished to do additional activities were asked to check all activities they wish they could do from the following categories.

### WISHES

(Percentage of Children)

Computer/Video Games/TV	28%
Free time/relaxing	43%
Friends and playing	58%
Learning new things	32%
Music and arts	41%
Physical and/or outdoor activities	64%
Time with family at home	40%
Other	19%

## AFTER-SCHOOL PLACES

### WHERE DO YOU GO AFTER SCHOOL?

	Never	1x /week	2x +/week
Home	3%	3%	94%
Stay at school for an activity	69%	12%	20%
After-school program or child care	84%	4%	12%
Friend's house	36%	43%	21%
Library	67%	25%	8%
Someplace else	47%	29%	24%



#### RESEARCH HIGHLIGHTS USE OF OUT-OF-SCHOOL TIME

*Participation in out-of-school programs can result in greater connectedness to school and success in school as well as decreased negative behaviours (Durlak et al., 2010).*

*Quiet reflection time and daydreaming is just as essential to brain health and development as active and focused activities (Immordino-Yang, 2012).*

*Children who demonstrate a lack of self-control and problem solving skills may experience the greatest benefit from activities such as music, arts and sports that help to develop these skills (Diamond, 2014).*

*A study examining the experiences of children in Grades 1–5 who participated in after-school programs found that children who participated in high-quality, structured after-school programs had increased social-emotional skills, in addition to fewer conduct problems and higher social self-control and assertion (Wade, 2015).*

*Challenging and enjoyable out-of-school activities can improve youth's ability to reason and problem solve, exercise choice and discipline and be creative and flexible, which are strong predictors of academic, career, and life success (Diamond, 2014).*

*Excessive screen time and social media use have been linked to some negative psychosocial outcomes (Alonso et al., 2021). However, screen time can be a source of connection for some children and youth (Przybylski & Weinstein, 2019) indicating that moderation is key.*



# SCHOOL EXPERIENCES

Children's sense of safety and belonging at school has been shown to foster their school success in many ways. When children have positive experiences at school, they are more likely to feel they belong within their school, feel more motivated and engaged, and have higher academic achievement (Wang & Degol, 2016). Children who feel a sense of connection and belonging to school are also less likely to engage in high-risk behaviours (Eccles & Roeser, 2011). Understanding children's school experiences improves the ability to both create and cultivate school environments that are safe, caring, and supportive.

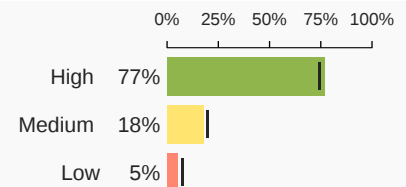
Detailed information on the MDI survey questions and response scales for School Experiences are available in the [Discover MDI Field Guide](https://www.discovermdi.ca/school-experiences/) (<https://www.discovermdi.ca/school-experiences/>).

## RESULTS FOR CENTRAL OKANAGAN

| Average for all Schools

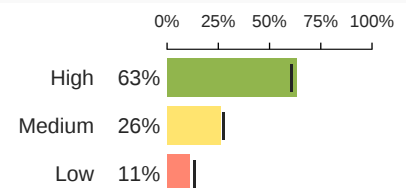
### ACADEMIC SELF CONCEPT

Children's beliefs about their academic ability, including their perceptions of themselves as students and how interested and confident they feel in school. e.g., "I am certain I can learn the skills taught in school this year."



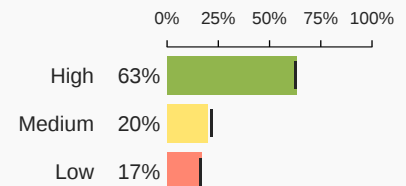
### SCHOOL CLIMATE

The overall tone of the school environment, including the way teachers and students interact and how students treat each other. e.g., "People care about each other in this school."



### SCHOOL BELONGING

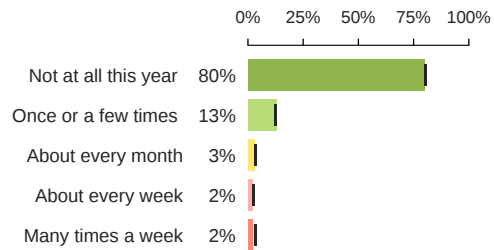
School belonging is the degree to which children feel connected and valued at their school. e.g., "I feel like I am important to this school."



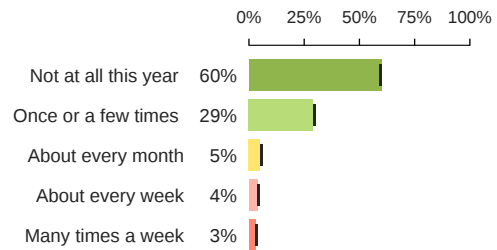
## VICTIMIZATION AND BULLYING AT SCHOOL

Children are asked: "During this school year, how often have you been bullied by other students in the following ways?":

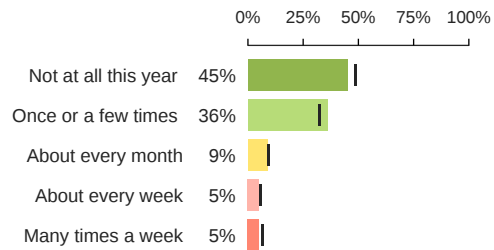
### CYBER



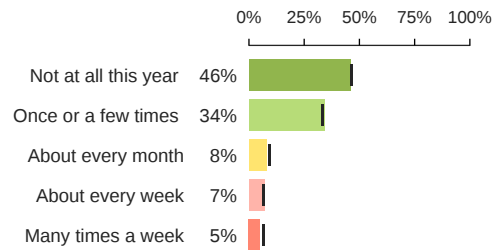
### PHYSICAL



### SOCIAL



### VERBAL



### RESEARCH HIGHLIGHTS SCHOOL EXPERIENCES

Children's perception of kindness within a school is a consistent indicator of a positive school climate. Students who see kind behaviours in students, teachers and staff also describe their school environments as being safe and encouraging places to learn. As children transition from Grade 4 to Grade 8, perceptions of kindness in schools decrease (Binfet, Gademmann & Schonert-Reichl, 2016).

Feelings of belonging are associated with lower emotional distress, the reduction of negative behaviours (such as bullying and mental health issues) and are associated to rates of higher resilience later in life (van Harmelen et al., 2016).

Children and youth who demonstrate empathy are less likely to bully others and are more likely to defend against bullying. Research shows that specific empathy skills differ between those who bully, are victimized, defend or are bystanders. Focusing on developing children's understanding of what others feel results both in less bullying and more defending behaviours (van Noorden et al, 2015).



# MOVING TO ACTION WITH DISCOVERMDI.CA

MDI data can support planning, foster collaboration and inform action across schools, organizations and communities. There are many opportunities for working with your MDI results and there are examples of successful initiatives from across the province to learn from.

We encourage you to take time to visit **Discover MDI: A Field Guide to Well-being in Middle Childhood** at [discovermdi.ca](https://www.discovermdi.ca), an online resource where you can access information and research on the many aspects of well-being in middle childhood, resources and tools for understanding and sharing MDI data and to connect with MDI Champions who are working on similar issues in their schools and communities. Here are some key resources and tools to get you started:

## UNDERSTAND YOUR MDI DATA

MDI reports provide information with both detail and depth into the social and emotional lives of children. Approach the results with a lens of curiosity, inquiry and appreciation. The Discover MDI Field Guide can walk you through [how to read and interpret your MDI data](https://www.discovermdi.ca/exploring-mdi-data/) (<https://www.discovermdi.ca/exploring-mdi-data/>). It also provides background research tools such as the [MDI Quicksheets](https://discovermdi.ca/resources/mdi-quick-sheets-Compilation/) (<https://discovermdi.ca/resources/mdi-quick-sheets-Compilation/>) to support further understanding of MDI data.

## CHOOSING A FOCUS: THINK BIG, START SMALL

It may be overwhelming to consider the many opportunities for change presented in the MDI data. Where will your focus be? What results do you have some influence over? How will you make change? For example, if you are interested in the area of social and emotional development, the Discover MDI Field Guide provides in-depth information on the [MDI and its dimensions and measures](https://www.discovermdi.ca/intro-to-mdi-dimensions-and-indices/) (<https://www.discovermdi.ca/intro-to-mdi-dimensions-and-indices/>), including the [measures of social and emotional development](https://www.discovermdi.ca/social-emotional-development/) (<https://www.discovermdi.ca/social-emotional-development/>).

## ENGAGING OTHERS

Increasing local dialogue on the importance of child well-being in the middle years is an excellent way to start improving outcomes for children. Once you are ready, review your MDI report with multiple audiences: children, parents and elders, caregivers and teachers, school administrators, after-school programmers, local early/middle childhood committees, local government and other community stakeholders. Visit the Discover MDI Field Guide for tips and tools to [widen the conversation and to think critically about the data together](https://www.discovermdi.ca/sharing-mdi-data/) (<https://www.discovermdi.ca/sharing-mdi-data/>).

## EXPLORE NEIGHBOURHOOD DATA

The [MDI Data Dashboard](https://mdi.dashboard.earlylearning.ubc.ca) (<https://mdi.dashboard.earlylearning.ubc.ca>) is a new online, interactive tool for exploring trends in MDI data from 2018/19 to present.

## MAKING CHANGE

The MDI provides opportunities to weave together data and local knowledge to create a change process that reflects the unique context of your school, district or community. The Discover MDI Field Guide's 'Making Change Workshops' support school and community change-makers through the process of facilitating exploration of MDI data, creating action teams and turning ideas into concrete plans. There are full facilitation guides for each workshop, paired with worksheets and companion slide decks. Explore [workshop resources](https://www.discovermdi.ca/workshops/) (<https://www.discovermdi.ca/workshops/>).

## SHARING DATA WITH CHILDREN

Do the results surprise you or raise further questions? Conversations with children will help explore and clarify results in these areas. Sharing data with children will provide them with an opportunity to share their perspectives and ideas on how to create environments and interactions that help them thrive. If you are wondering how to involve children of all ages and their families in exploring these results, [explore MDI essential resources](https://www.discovermdi.ca/category/mdi-essentials/) (<https://www.discovermdi.ca/category/mdi-essentials/>).

## BE INSPIRED AND CONNECT WITH OTHERS

Innovation happens when people build on ideas, rather than simply duplicating them. The Discover MDI Field Guide provides opportunities to learn from seasoned MDI Champions – [check out their stories and learn from their approaches](https://www.discovermdi.ca/making-change-with-the-mdi/), (<https://www.discovermdi.ca/making-change-with-the-mdi/>), explore the collection of [downloadable tools](https://www.discovermdi.ca/category/mdi-essentials/) (<https://www.discovermdi.ca/category/mdi-essentials/>) and [find upcoming training and learning opportunities](https://www.discovermdi.ca/category/news-and-events/) (<https://www.discovermdi.ca/category/news-and-events/>). Be inspired, edit, adapt or create new!

If you have any additional questions about the MDI project, please visit our website at [earlylearning.ubc.ca/mdi](https://earlylearning.ubc.ca/mdi) or contact the MDI team at [mdi@help.ubc.ca](mailto:mdi@help.ubc.ca).

# REFERENCES

## INTRODUCTION TO THE MDI

Jacobs, R. H., Reinecke, M. A., Gollan, J. K., & Kane, P. (2008). Empirical evidence of cognitive vulnerability for depression among children and adolescents: A cognitive science and developmental perspective. *Clinical Psychology Review, 28*(5), 759–782. Science Direct.

Rubin, K. H., Bukowski, W. M., & Parker, J. G. (2006). Peer interactions, relationships, and groups. In N. Eisenberg, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology: Social, emotional, and personality development* (pp. 571–645). John Wiley & Sons Inc.

## SOCIAL & EMOTIONAL DEVELOPMENT

Domitrovich, C. E., Durlak, J. A., Staley, K. C., & Weissberg, R. P. (2017). Social-emotional competence: An essential factor for promoting positive adjustment and reducing risk in school children. *Child Development, 88*(2), 408-416.

<http://dx.doi.org/10.1111/cdev.12739>

Gunasiri, H., Wang, Y., Watkins, E. M., Capetola, T., Henderson-Wilson, C., & Patrick, R. (2022). Hope, coping and eco-anxiety: Young people's mental health in a climate-impacted Australia. *International Journal of Environmental Research and Public Health, 19*(9), 5528. <https://doi.org/10.3390/ijerph19095528>

Jones, D. E., Greenberg, M., & Crowley, M. (2015). Early social-emotional functioning and public health: The relationship between kindergarten social competence and future wellness. *American Journal of Public Health, 105*(11), 2283-2290.

<https://dx.doi.org/10.2105%2FAJPH.2015.302630>

Mahoney, J., Weissberg, R., Greenberg, M., Dusenbury, L., Jagers, R., Niemi, K., Schlinger, M., Schlund, J., Shriver, T., VanAusdal, K., & Yoder, N. (2020). Systemic social and emotional learning: Promoting educational success for all preschool to high school students. *American Psychologist, 1*-16. <https://casel.org/wp-content/uploads/2020/10/Design-Systemic-SEL.pdf>

Skinner, E. A., & Zimmer-Gembeck, M. J. (2016). Development of coping during middle childhood: Cognitive reappraisal, mental modes of coping, and coordination with demands. In E. A. Skinner & M. J. Zimmer-Gembeck, *The Development of Coping* (pp. 163–183). Cham: Springer International Publishing.

Weissberg, R.P., Durlak, J.A., Domitrovich, C.E., & Gullotta, T.P. (2015). Social and emotional learning: Past, present, and future. In J.A. Durlak, C.A. Domitrovich, R.P. Weissberg, & T.P. Gullotta (Eds.) *Handbook of social and emotional learning* (3–19). New York, NY: Guilford Press.

## PHYSICAL HEALTH & WELL-BEING

Andermo, S., Hallgren, M., Nguyen, T., Jonsson, S., Petersen, S., Friberg, M., Romqvist, A., Stubbs, B., & Elinder, L. S. (2020). School-related physical activity interventions and mental health among children: A systematic review and metaanalysis. *Sports Medicine - Open, 6*(1). <https://doi.org/10.1186/s40798-020-00254-x>

Forrest, C. B., Bevans, K. B., Riley, A. W., Crespo, R., & Louis, T. A. (2013). Health and school outcomes during children's transition into adolescence. *Journal of Adolescent Health, 52*(2), 186-194. <https://doi.org/10.1016/j.jadohealth.2012.06.019>

Harrison, M. E., Norris, M. L., Obeid, N., Fu, M., Weinstangel, H., & Sampson, M. (2015). Systematic review of the effects of family meal frequency on psychosocial outcomes in youth. *Canadian Family Physician, 61*(2), 96–106.

Hertzman, C., & Boyce, T. (2010). How experience gets under the skin to create gradients in developmental health. *Annual Review of Public Health, 31*(1), 329 - 347. <https://doi.org/10.1146/annurev.publhealth.012809.103538>

Moeijes, J., van Busschbach, J. T., Bosscher, R. J., & Twisk, J. W. R. (2018). Sports participation and psychosocial health: A longitudinal observational study in children. *BMC Public Health, 18*(702). <https://doi.org/10.1186/s12889-018-5624-1>

Reichelt, A. C. (2016). Adolescent maturational transitions in the prefrontal cortex and dopamine signaling as a risk factor for the development of obesity and high fat/high sugar diet induced cognitive deficits. *Frontiers in Behavioral Neuroscience, 10*, 1–17.

Smaldone A, Honig J., & Byrne M. (2007). Sleepless in America: inadequate sleep and relationships to health and well-being of our nation's children. *Pediatrics, 119* (suppl 1): S29-S37.

## CONNECTEDNESS

Arslan, G., & Allen, K.A. (2021). School victimization, school belongingness, psychological well-being, and emotional problems in adolescents. *Child Indicators Research*, 14, 1501–1517. <https://doi.org/10.1007/s12187-021-09813-4>

Emerson, S. D., Mâsse, L. C., Ark, T. K., Schonert-Reichl, K. A., & Guhn, M. (2018). A population-based analysis of life satisfaction and social support among children of diverse backgrounds in British Columbia, Canada. *Quality of Life Research*, 27(10), 2595–2607. <https://doi.org/10.1007/s11136-018-1922-4>

First Nations Information Governance Centre. Now is the time: Our data, our stories, our future. The national report of the First Nations regional early childhood, education, and employment survey. Ottawa, ON: FNIGC; 2016. Available from [https://fnigc.ca/wp-content/uploads/2021/01/FNIGC\\_FNREEES-National-Report-2016-EN\\_FINAL\\_01312017.pdf](https://fnigc.ca/wp-content/uploads/2021/01/FNIGC_FNREEES-National-Report-2016-EN_FINAL_01312017.pdf).

Gadermann, A. M., Guhn, M., Schonert-Reichl, K. A., Hymel, S., Thomson, K., & Hertzman, C. (2015). A population-based study of children's well-being and health: the relative importance of social relationships, health-related activities, and income. *Journal of Happiness Studies*, 17, 1847–1872.

Guhn, M., Schonert-Reichl, K. A., Gadermann, A. M., Hymel, S., & Hertzman, C. (2013). A population study of victimization, relationships, and well-being in middle childhood. *Journal of Happiness Studies*, 14(5), 1529–1541.

Masten, A. S. (2018). Resilience theory and research on children and families: past, present, and promise. *Journal of Family Theory & Review*, 10(1), 12–31. <https://doi.org/10.1111/jftr.12255>

Oberle, E., Guhn, M., Gadermann, A. M., Thomson, K., & Schonert-Reichl, K. A. (2018). Positive mental health and supportive school environments: A population-level longitudinal study of dispositional optimism and school relationships in early adolescence. *Social Science & Medicine*, 214, 154–161.

Oberle, E., Schonert-Reichl, K. A., Guhn, M., & Hertzman, C. (2014). The role of supportive adults in promoting positive development in middle childhood: a population-based study. *Canadian Journal of School Psychology*, 29, 296–316.

Olsson, C., McGee, R., Nada-Raja, S., & Williams, S. (2013). A 32-year longitudinal study of child and adolescent pathways to well-being in adulthood. *Journal of Happiness Studies*, 14(3), 1069–1083.

Thomson, K. C., Oberle, E., Gadermann, A. M., Guhn, M., Rowcliffe, P., & Schonert-Reichl, K. A. (2018). Measuring social-emotional development in middle childhood: The Middle Years Development Instrument. *Journal of Applied Developmental Psychology*, 55, 107–118. <https://doi.org/10.1016/j.appdev.2017.03.005>

Veiga, F., Wentzel, K., Melo, M., Pereira, T., Faria, L., & Galvão, D. (2014). Students' engagement in school and peer relations: A literature review. In *I Congresso Internacional Envolvimento dos Alunos na Escola: Perspetivas da Psicologia e Educação* (pp. 196–211).

Werner, E. E. (2004). Journeys from childhood to midlife: Risk, resilience, and recovery. *Pediatrics*, 114(2), 492–492.

## USE OF OUT-OF-SCHOOL TIME

Alonzo, R., Hussain, J., Stranges, S., & Anderson, K. K. (2021). Interplay between social media use, sleep quality, and mental health in youth: A systematic review. *Sleep Medicine Reviews*, 56, 101414–101414. <https://doi.org/10.1016/j.smrv.2020.101414>

Diamond, A. (2014). Want to optimize executive functions and academic outcomes?: Simple, just nourish the human spirit. In *Minnesota Symposia on Child Psychology* (Vol. 37, p. 205). NIH Public Access.

Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology*, 45(3–4), 294–309.

Immordino-Yang, M. H., Darling-Hammond, L., & Krone, C. R. (2019). Nurturing nature: How brain development is inherently social and emotional, and what this means for education. *Educational Psychologist*, 54(3), 185–204. <https://doi.org/10.1080/00461520.2019.1633924>

Immordino-Yang, M. H., Christodoulou, J. A., & Singh, V. (2012). Rest is not idleness implications of the brain's default mode for human development and education. *Perspectives on Psychological Science*, 7(4), 352–364.

Linver, M. R., Roth, J. L., & Brooks-Gunn, J. (2009). Patterns of adolescents' participation in organized activities: Are sports best when combined with other activities? *Developmental Psychology*, 45(2), 354–367. <https://doi.org/10.1037/a0014133>

Przybylski, A. K., Orben, A., & Weinstein, N. (2020). How much is too much? examining the relationship between digital screen engagement and psychosocial functioning in a confirmatory cohort study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 59(9), 1080–1088. <https://doi.org/10.1016/j.jaac.2019.06.017>

Thouin, É., Dupéré, V., Dion, E., McCabe, J., Denault, A-S., Archambault, I. Brière, F.N., Leventhal, T., & Crosnoe, R. (2020) School-based extracurricular activity involvement and high school dropout among at-risk students: Consistency matters. *Applied Developmental Science*, 1-14. <https://doi.org/10.1080/10888691.2020.1796665>

Vandell, D. L., Lee, K. T. H., Whitaker, A. A., & Pierce, K. M. (2020). Cumulative and differential effects of early child care and middle childhood out-of-school time on adolescent functioning. *Child Development*, 91(1), 129-144. <https://doi.org/10.1111/cdev.13136>

Wade C. (2015). The longitudinal effects of after-school program experiences, quality, and regulatable features on children's social-emotional development. *Child and Youth Services Review*, 48, 70–79.

## SCHOOL EXPERIENCES

Binfet, J., Gadermann, A., & Schonert-Reichl, K. (2016). Measuring kindness at school: psychometric properties of a school kindness scale for children and adolescents. *Psychology in the Schools*, 53(2), 111–126.

Eccles, J. S., & Roeser, R. W. (2011). Schools as developmental contexts during adolescence. *Journal of Research on Adolescence*, 21(1), 225-241. <http://dx.doi.org/10.1111/j.1532-7795.2010.00725.x>

van Harmelen A. L., Gibson, J. L., St. Clair, M. C., Owens, M., Brodbeck, J., Dunn, V., ... Goodyer, I. M. (2016). Friendships and family support reduce subsequent depressive symptoms in at-risk adolescents. *PLoS ONE* 11(5): e0153715.

van Noorden, T. H., Haselager, G. J., Cillessen, A. H., & Bukowski, W. M. (2015). Empathy and involvement in bullying in children and adolescents: A systematic review. *Journal of Youth and Adolescence*, 44(3), 637–657

Wang, M.-T., & Degol, J. L. (2016). School climate: A review of the construct, measurement, and impact on student outcomes. *Educational Psychology Review*, 28(2), 315-352. <https://doi.org/10.1007/s10648-015-9319-1>

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