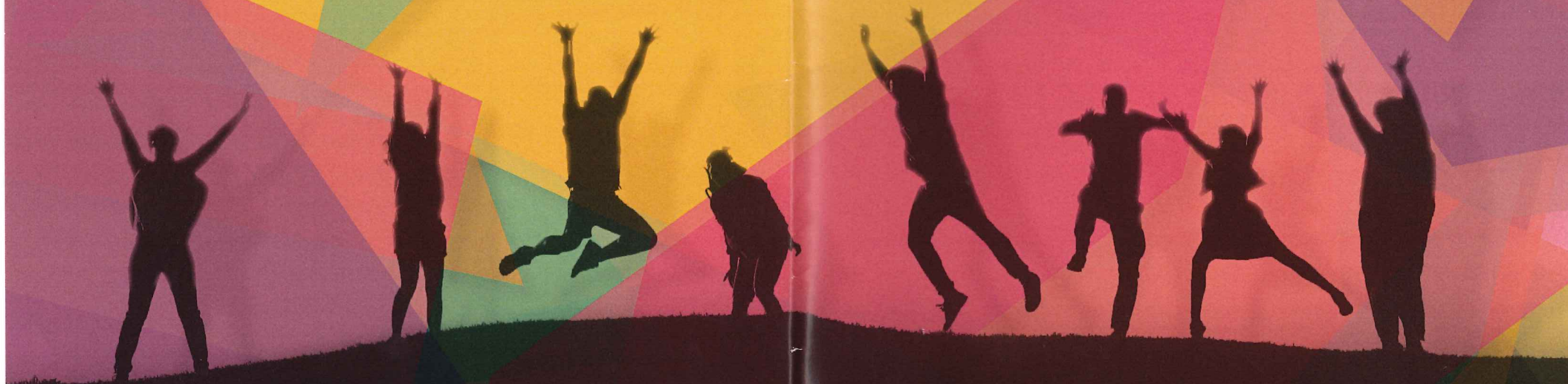


RECREATION PRESCRIPTION PROJECT

REPORT



2019



*This project has been made possible by the
Island Health Wellness Grant and Donations
– Thank you*

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INTRODUCTION

The Recreation Prescription Project has been a collaborative partnership between City of Nanaimo Parks & Recreation, Vancouver Island University (VIU), School District (SD) 68 and primary care providers to promote youth health and well-being. This project was community driven, participatory, and action oriented. By implementing research that embodies these three hallmarks, those involved aim to produce research processes and results that are useful to community members in making societal changes.

VISION:

ENGAGING STUDENTS IN MEANINGFUL RECREATION EXPERIENCES THAT FOSTER WELLBEING IN THE: INDIVIDUAL, NATURAL + BUILT ENVIRONMENTS, AND THE COMMUNITY AS A WHOLE.

VALUES:

- PUBLIC GOOD
- INCLUSION + EQUITY
- SUSTAINABILITY
- LIFELONG PARTICIPATION

PRINCIPLES:

- OUTCOME DRIVEN
- QUALITY + RELEVANCE
- EVIDENCE BASED PARTNERSHIPS
- INNOVATION

PROGRAM DETAILS



3

ELEMENTARY SCHOOLS



43

MALE RESEARCH PARTICIPANTS



45

FEMALE RESEARCH PARTICIPANTS



32

TEACHERS RESEARCHERS VOLUNTEERS



120

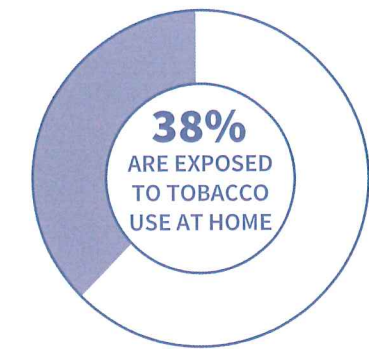
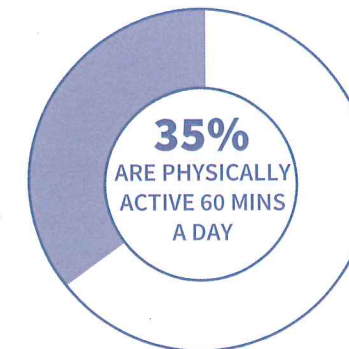
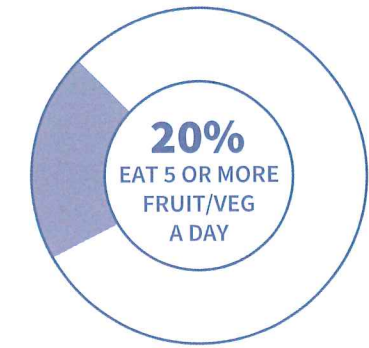
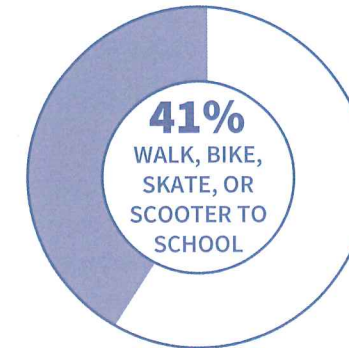
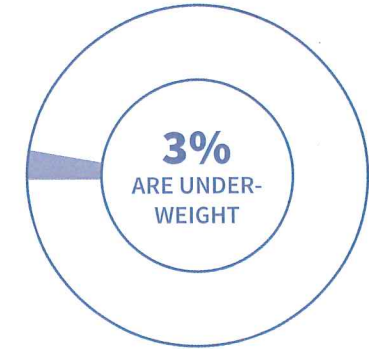
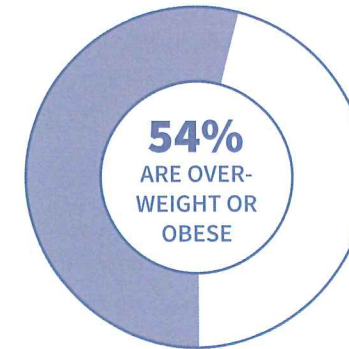
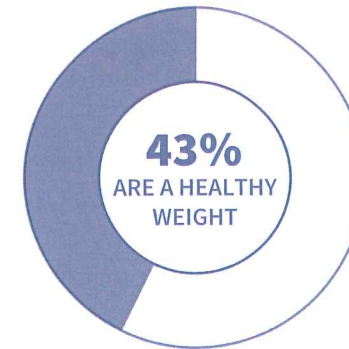
PROGRAM PARTICIPANTS



RESULTS FROM THE STUDENTS THEMSELVES

AT A GLANCE

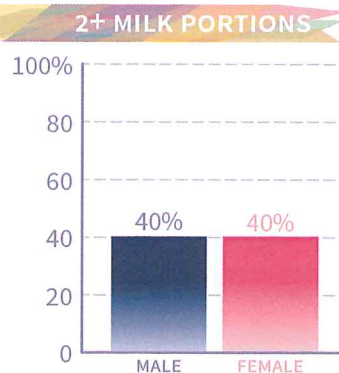
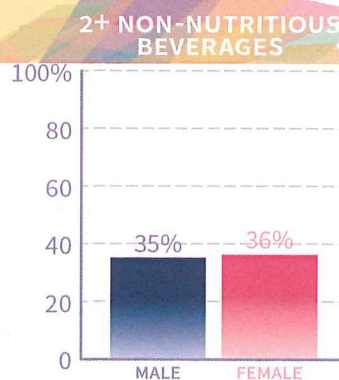
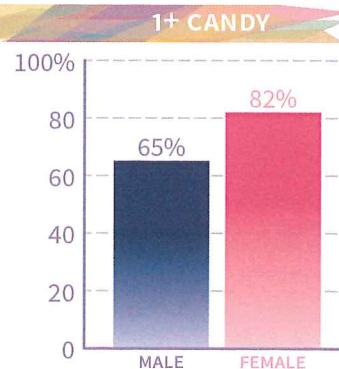
QUICK-STATS ABOUT THE 88 CHILDREN WHO PARTICIPATED IN THE RESEARCH



HOW CAN WE IMPROVE THESE NUMBERS?

HEALTHY WEIGHTS AND LIFESTYLE

DAILY FOOD AND BEVERAGE CONSUMPTION



Child obesity is rising, sedentary pursuits are increasing and there is less contact with nature and decreased physical activity. For some youth populations, these factors combine with low income and other systemic disadvantages to create a trajectory of ill health that can have a myriad of long-term personal and societal negative effects. For Island Health overall, vulnerability has increased between 2007/2009 and 2014/2016 and the Greater Nanaimo local health authority has higher levels of vulnerability than Island Health and BC (*Island Health, 2018*).

Access to healthy food, education, healthy environments and recreational opportunities influence our health and wellbeing.

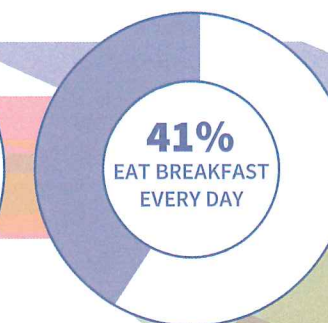
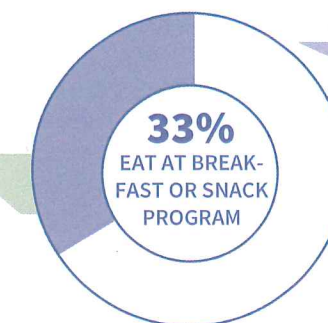
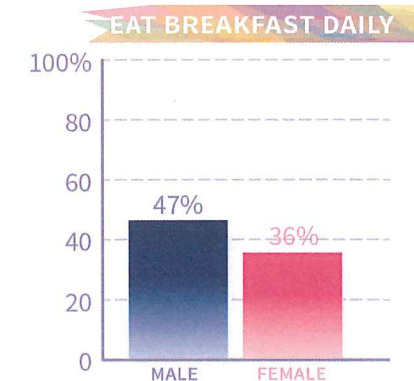
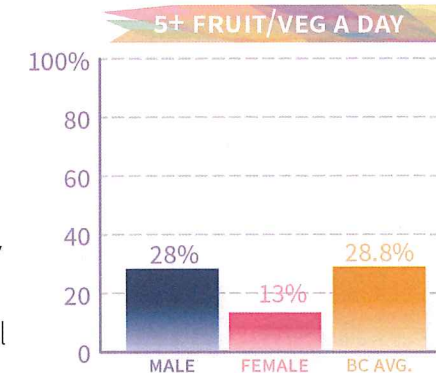
EATING BEHAVIOURS

Fruits and vegetables are part of a well-balanced and healthy eating plan. Some types of cancers and other chronic diseases may be reduced by diets rich in fruits and vegetables. Fruits and vegetables also provide essential vitamins and minerals, fibre, and other substances that are important for good health. Children and adolescents who eat fruits and vegetables five or more times a day are less likely to be overweight or obese compared to those who consume less of these healthy foods. (*Stats Canada*)

According to the World Health Organization (2015) the latest evidence on diet and health indicates that intakes of added sugars, in particular from sugar-sweetened beverages, are associated with the risk of excess body weight and obesity in both children and adults. The consumption of sugary beverages is also associated with the risk of dental deficiencies and poor oral health in children.

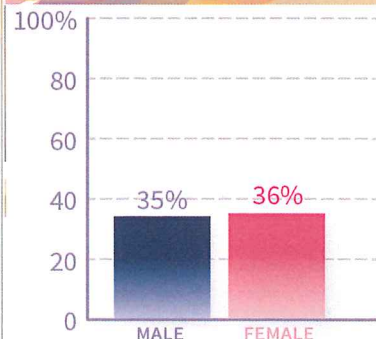
EATING BREAKFAST

Overall health and well-being go hand in hand with good eating habits. Poor nutrition in children increases the risk of developing chronic illnesses such as asthma, diabetes and heart disease. When children get a balanced meal in a positive, stimulating environment, there are marked improvements in behaviour and concentration, academic performance, social skills, self-confidence and the ability to interact with peers and adults. (*Lillico, et al 2014*)



OF THE 88 CHILDREN WHO PARTICIPATED IN THE RESEARCH...

PHYSICALLY ACTIVE 1HR A DAY



PARTICIPATING IN PHYSICAL ACTIVITY

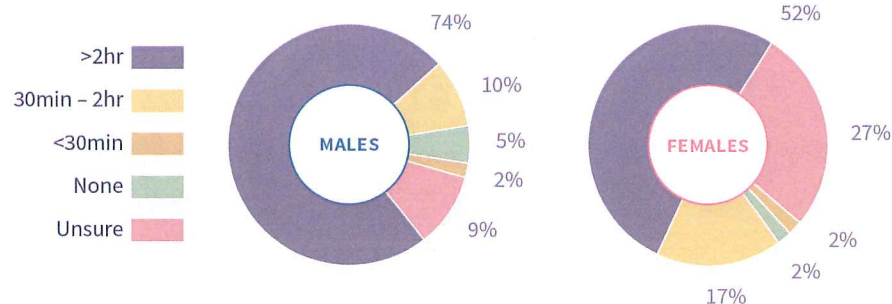
Physical inactivity has been identified as the fourth leading risk factor for global mortality (*WHO, 2019*). Health benefits of regular and physical activity include improved fitness, strength and feeling better. It is recommended that children should be physically active for a minimum of 60 minutes daily for optimal growth and development (*CSEP, 2017*). Increasing

physical activity is not just an individual problem but rather a societal problem. Therefore, it demands a culturally relevant approach that is population-based, multi-sectoral, and multi-disciplinary.

SCREEN TIME

Spending excessive time engaging in sedentary behaviours, such as watching TV, playing video games, and other screen time activities, contributes to obesity and ill health. Kids are inactive and may be losing sleep over it. They aren't moving enough to be tired, and they may also be too tired to move. The Canadian Behaviour Guidelines for Children and Youth (*CSEP, 2017*) recommend no more than 2 hours per day of recreational screen time; limited sitting for extended periods. Trading indoor time for outdoor time, and replacing sedentary behaviours, such as screen time, with light physical activity can provide greater health benefits.

DAILY SCREEN TIME



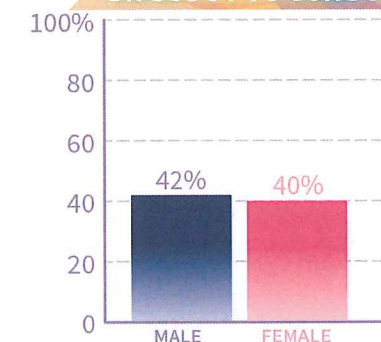
TRANSPORTATION

Human powered forms of travel referred to as active transportation may include running, long boarding, skateboarding, in-line skating, and using electric bicycles or scooters. Walking and cycling are the most common modes of travel. Active transportation provides youth with meaningful opportunities to connect with neighbours and their communities, and it improves their physical and mental wellbeing. (*BC Active Transportation Strategy, 2019*).

TAKES A BUS OR GETS A RIDE TO SCHOOL



WALK, BIKE, SKATE, OR SCOOT TO SCHOOL



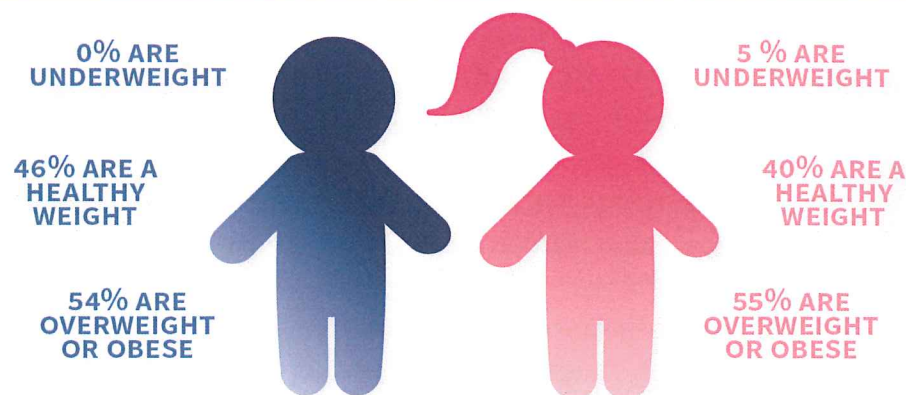
HEALTHY BODY WEIGHT/BMI

The Body Mass Index (BMI) estimates a person's body fat percentage. Determining the BMI for children under 18 years old is not only based on height and weight, but also has to take into account children's age and gender. That is because children's body fat percentages can vary considerably as they grow older.

A child's BMI is estimated through percentiles that compare children of the same age and gender into weight categories: underweight: below the 5th percentile; healthy weight: 5th percentile to the 85th percentile; overweight: 85th percentile to the 95th percentile; obese: 95th percentile or higher.

The BMI was calculated for each child and plotted onto the reference charts to find each child's percentile.

BODY MASS INDEX



*Link used as reference for the calculations:

www.dietitians.ca/Your-Health/Assess-Yourself/Assess-Your-BMI/BMI-Children.aspx

*BMI should be interpreted with caution due to the developmental age of children.

MENTAL FITNESS

Mental fitness is functioning well and a sense of feeling good about ourselves. What we do and how we think can impact our mental health and we can take action to help us be at our best when our needs for recognition (competence), choices (autonomy), and belonging (relatedness) are met.

MENTAL FITNESS NEEDS

Mental fitness is important to maintaining your brain and your body health. It is fostered in environments and relationships that address three interrelated needs: competence, autonomy and relatedness. *New Brunswick Wellness Survey (2014)*

"I have strengths and gifts that are recognized by myself and others."

Competence: We need to be able to recognize and use our personal gifts and strengths in achieving personal goals. Fulfillment of this need provides us with a sense of personal achievement and accomplishment.

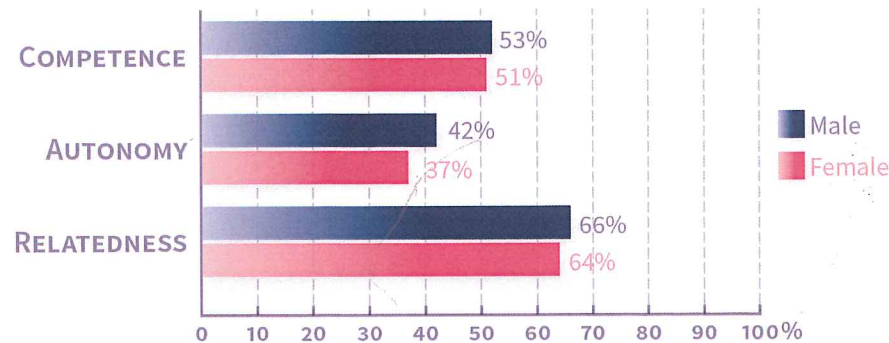
"I am able to make choices about things that are important to me."

Autonomy: We need personal freedom to make choices or decisions that affect our lives. When this need is satisfied in conjunction with other psychological needs, freedom and choice are expressed in ways in which respect is demonstrated for one's self and others.

"I feel included, supported and encouraged by others."

Relatedness: We need connection to and closeness with family, peers and other significant individuals. This need is met through interaction with others, our membership in groups, and the support and encouragement we receive from others.

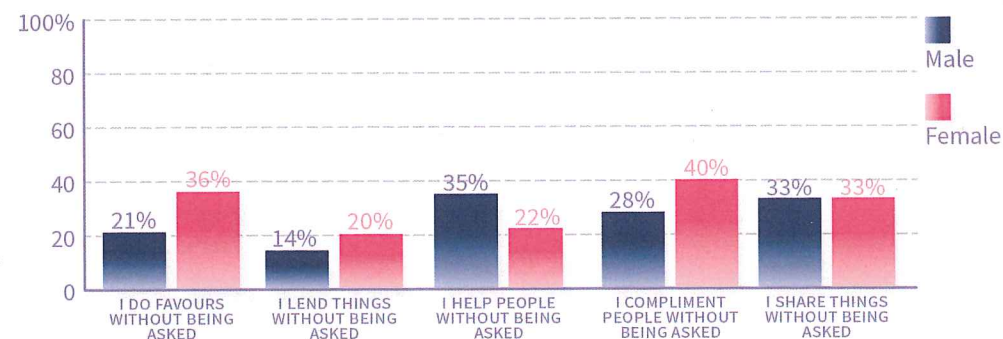
MENTAL FITNESS NEEDS



PRO-SOCIAL BEHAVIOURS

Pro-social behaviours are those intended to help other people. It is characterized by empathy, generosity and concern for the rights, feelings, and welfare of other people. Pro-social behaviours have also been shown to strengthen academic achievement over the years. (Caprara et al, 2014).

PRO-SOCIAL BEHAVIOURS



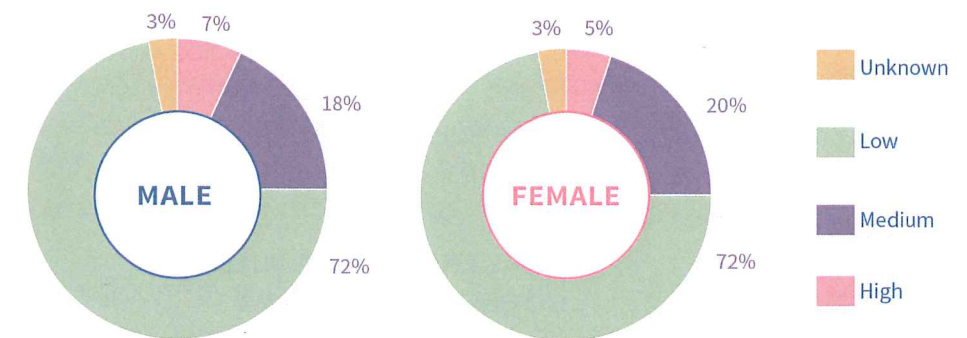
Based on an array of social behaviour questions, girls from grade 4, 5, and 6 reported having more positive pro-social behaviours compared to boys.

OPPOSITIONAL BEHAVIOURS

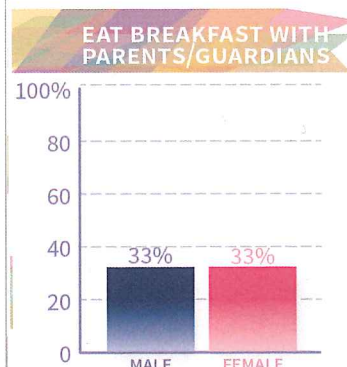
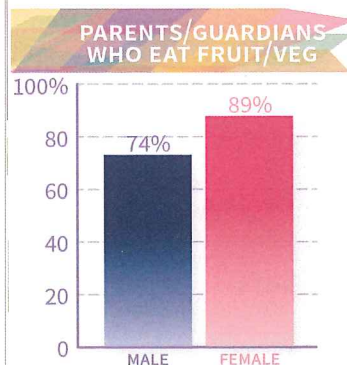
Oppositional behaviours are defined as being defiant, disrespectful or rude to others. Oppositional behaviours in childhood have been associated to negative factors later in life, such as risk of academic challenges, school drop-out, unhealthy social relationships, substance abuse, conflict with the law, and increased risk of mental health issues. (Quigley and Maggi, 2014).

Medium to high levels of oppositional behaviours are shown to be present in 25% of both boys and girls in grades 4, 5, and 6.

OPPOSITIONAL BEHAVIOUR



SOCIAL RELATIONSHIPS AND ENVIRONMENTS



BC Provincial Health (2013) identifies that dimensions of child and youth health and well-being together determine, to a significant extent how a child's health will unfold. The dimensions of child health and well-being have many ecological conditions and contexts including social relationships, mental, emotional and physical health and well-being. The child's environment includes experiences with family, peers, school, community, culture, technology and health systems. There is little doubt that these conditions and contexts have a strong influence on outcomes.

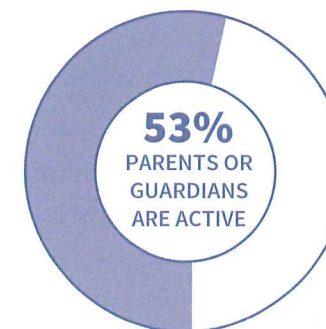
HEALTHY EATING AND SOCIAL INFLUENCES

Children's eating patterns are strongly influenced by parents and family members through their behaviours, attitudes, routines and food choices. Children are more likely to eat foods that are available and easily accessible, and they tend to eat greater quantities when larger portions are provided. Mealtime structure, such as families eating together, TV-viewing during meals, and the source of foods (e.g., restaurants, schools) all strongly influence a child.

Modeling healthy food choices and establishing consistent meal time by parents may play an important role in helping students develop healthy attitudes towards food and nutrition. (Larsen, et al 2015)

PHYSICAL ACTIVITY ROLE MODELING

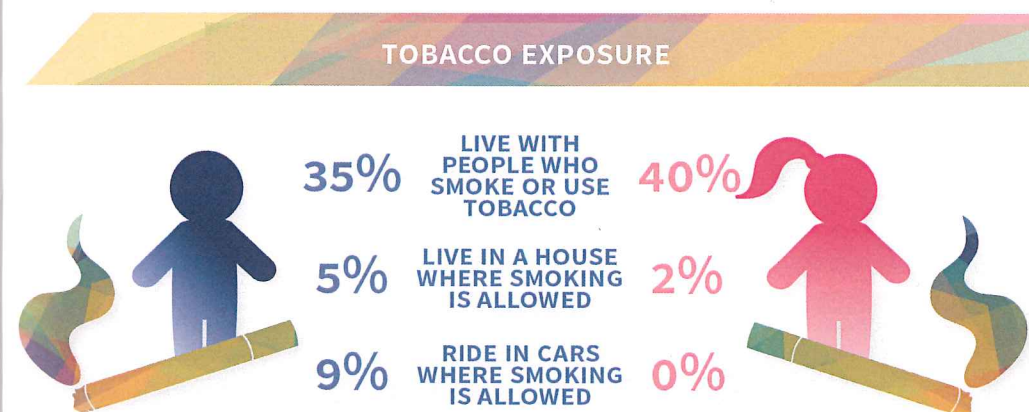
Parents can model healthy behaviours through participation in regular physical activity. The Canadian 24-hour movement and activity guidelines (2017) suggests active parents often have active kids which has the potential to increase levels of concentration, relaxation and focus. According to grade 4, 5, and 6 students, 53%, of both males and females indicated their parents or guardians are physically active.



TOBACCO EXPOSURE

Canadian Paediatric Society (2016) indicates exposure to smoking in a child's surroundings may be related to the uptake of smoking behaviour. In addition, second-hand smoke can have serious health effects such as cancer, heart attacks and respiratory ailments.

As reported by students in grade 4, 5, and 6, 35% of males and 40% females continue to live with people who smoke or use tobacco.



FRAMEWORK FOR RECREATION

Parks and recreation organizations, primarily public agencies, play a role in facilitating and managing opportunities to be recreationally active. Numerous facilities, programs, and park areas are publicly supported to encourage the involvement of people of all age groups in active “play.” Lack of time and spaces for play, and hostile attitudes towards children playing outdoors can have damaging implications for children’s health and happiness. Recreation as intervention for health inequities reflects the emerging shift towards collaborative approaches to planning that aim to be responsive to community needs. *(Collins, 2013)* Children were engaged in recreation experiences that foster:



ACTIVE LIVING

- Leisure continuity from early intervention
- Free Play and physical literacy
- Digital detox and reduced screen time



SUPPORTIVE ENVIRONMENTS

- Active transportation
- Self-reported healthy/unhealthy lifestyles reflected through Photovoice
- BC Ministry of Education Grade 5 curriculum



INCLUSION + ACCESS

- Grade 5 Active Pass
- Free recreation programming
- Reduced barriers and constraints



CONNECTING PEOPLE + NATURE

- Played in 15 parks & 10 recreation spaces
- Weekly “fitbit” and “health bit” challenges
- Access to outdoor gear and nutritious food



RECREATION CAPACITY

- Collaborative system (interdisciplinary and inter-sectoral approach)
- Coordinated community assets
- 25 VIU Healthy Role Models

MOVING FORWARD

- ✓ Results have produced a health and well-being baseline
- ✓ Secure funding for implementation of a three-year longitudinal study
- ✓ Recreation as intervention has the potential to reduce health inequities
- ✓ Strengthen alignment to Ministry of Education Grade 5 curriculum
- ✓ An inter-sectoral and interdisciplinary approach is necessary to address root causes of youth health and wellbeing
- ✓ Production of information at a local level is extremely important in achieving our main objective of knowledge transfer and sharing of information that impacts policy
- ✓ Evidence of community engagement through partners continuing to be co-applicants and engagement in supporting new funding applications
- ✓ Need time to engage people. As a result, 2019/2020 will seek further input from community members, teachers, parents, children, stakeholders through secured \$20,000 Vancouver Foundation Convene Grant



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