

Living School: How School Communities Change Health-Promoting Attitudes and Increase Daily Physical Activity Levels

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Abstract

Introduction

Living School is an initiative that was designed to develop, support, and evaluate a comprehensive and coordinated community-driven approach to health promotion in elementary school communities. Through a comprehensive framework, Ophea (Ontario Physical and Health Education Association) facilitated and evaluated a pilot implementation of Living School.

Methods

Nine pilot school communities were recruited. Pre-and post-Living School implementation results were evaluated through community consultations, student surveys and teacher surveys. Qualitative data was also collected through documentation by all Living School sites regarding policy and program implementation.

Results

All Living Schools established some level of policy and program changes as a direct result of community partnerships. After implementation, most Living Schools reported, and some documented an increase in the attentiveness and alertness of students. Students tended to report an increased sense of belonging and safety within their school environments. There was a growing belief amongst Living School teachers in the ability of the school to influence student health behaviour and attitudes when this influence was compared to the influence of peer groups and the media. Both students and teachers reported an increase in the amount of daily physical activity in schools where the Living School model was fully implemented.

Interpretation

The results of the evaluation reveal Living School as a powerful intervention that, when fully implemented, influences the culture of schools and their surrounding communities in significant ways. Through partnerships, Living School communities were able to collaborate on identifying needs and collectively setting goals to meet those needs. All Living School pilot communities implemented policy and program changes that could be expected to directly or indirectly influence student health.

Conclusion

Living School is an intervention that addresses comprehensive school health by providing a framework that allows school communities to identify their own resources and use them in the most effective manner. The results of the Living School Pilot Project demonstrate that Living School is a powerful and effective way to transform the school environment into a healthy culture. This collective change in beliefs and attitudes led to an increase in daily physical activity. More research is needed to determine if other health-related behaviours can be affected in a Living School environment.

Introduction

Living School is an umbrella initiative designed to develop, support, and evaluate a comprehensive and coordinated community-driven approach to health promotion in elementary school communities. School communities consist of the school in interaction with its community including students, teachers, administrators, parents, boards of education, public health, sport and recreation organizations, community coalitions, local businesses and municipal governments. Based on global school health promotion models, Living School was developed by Ophea, in consultation with their provincial partners. Ophea is a not-for-profit organization dedicated to supporting school communities through advocacy, quality programs and services, and partnership building. Ophea is led by the vision that all kids will value, participate in, and make a lifelong commitment to active, healthy living.

Living School is a comprehensive framework that establishes healthy, active living opportunities for children and youth. The framework guides participating school communities through a four-phase process in which they address chronic disease risk factors that pose a primary threat to youth: physical inactivity, unhealthy eating, tobacco use, and alcohol and substance use and abuse. The framework is broad enough in its application that other risk factors, such as bullying and self-esteem issues, can also be addressed.

Living School serves to build and strengthen school community partnerships to support local action by focusing on four key areas: health policies and guidelines, health and physical education curriculum, healthy and supportive school community environments, and health promoting school community programs and services. The Living School model promotes the use of existing health promotion programs and resources.

Each school community develops its own Living School framework based on the needs and direction set by the school and community partners. Facilitated and supported by Ophea, a four-phase process is followed to assist each community to develop its own customized framework:

1. **Community consultation:** A consultation process that includes students, parents, school staff, and community partners representing education, health, and recreation sectors. The community consultation establishes local consensus, assesses community assets, determines local needs and develops a course of action for local initiatives.
2. **Declaration and commitment:** All community partners sign a Living School Charter which demonstrates their commitment to becoming a Living School.
3. **School community action:** The school community develops a Living School Action Plan that addresses the risk factors most relevant to their community.
4. **Evaluation and celebration:** Living School Action Plans are reviewed and evaluated in order to ensure continual improvement and future planning.

Living School addresses a growing public health issue facing Canadian children - a lifestyle that promotes inactivity and unhealthy eating. Between 1981 and 1996, the

number of obese children in Canada between the ages of seven and 13 tripled.¹ Two-thirds of children and youth are not active enough to lay a solid foundation for health and well-being.² Canadian society has become one that fails to support active, healthy living as a result of a lack of conducive community environments, easy access to unhealthy food choices at low cost, and the efficiencies technology has fostered in our society. Smoking rates in Canada are highest in the 20-24 age-group, and about 25% of smokers aged 20-24 had their first cigarette before their teens, and 66% had smoked their first cigarette by age 15.³ Peer culture and media have a very strong influence on children and youth.

During the 2004/05 school year, Ophea, guided by an expert scientific advisory group, implemented Living School in nine pilot sites throughout Ontario. The evaluation of Living School was conducted in order to determine to what extent there is a shift in values, attitudes, beliefs and understandings in the target school communities, its students and key stakeholders. The evaluation also consisted of collecting qualitative data that describe the unique ways that Living School is implemented in diverse school communities.

Methods

The Living School Pilot Project consisted of nine sites that included 17 schools and approximately 7,000 students. These sites were selected according to geographical and demographic criteria to ensure province-wide representation and diversity between urban, medium and smaller communities (see Table 1). A pilot site was defined as an individual school or a cluster of two or more schools that are in close geographic proximity and that work in partnership.

Ophea provided consultation support and funding to all pilot sites. For each site, a consultant facilitated community consultations, supported sites in completing their action plans, and provided ongoing support to the sites as they implemented their activities. Ophea also managed an information and resource hub (www.livingschool.ca) which provided key resources from various sources to assist pilot sites with implementation. Ophea implemented marketing and communications activities in each Living School community to increase awareness.

Observations of participating school communities and selected students within them were made before and after implementation of the Living School Framework and activities. The principle measurement/assessment tools were:

1. Community Stakeholders

Community consultations with school community members were conducted in the late winter and spring of 2004 prior to the implementation of Living School, and were repeated after implementation in spring of 2005.

2. Students

Three grade 7 classes (Grade 6 if there were no Grade 7 classes) were selected from each school. A total of 479 students were surveyed in 2004, and a slightly larger sample of 520 was surveyed in 2005 (unmatched survey). A self-reported questionnaire entitled “My Health, My School and Me” was administered at the beginning and the end of the 2004/05 school year. This survey was adapted from a well-tested scientifically valid Health Canada Survey called “Voices and Choices.”

3. Teachers

A sample of 100 teachers completed semi-structured surveys at the beginning and end of the 2004/05 school year. The surveys were matched at an individual level.

Knowledge Transfer (KT) was the conceptual framework used to evaluate Living School. KT provided a way to study desired outcomes as a function of the success to which information and knowledge were transmitted from a source or “sender” to a destination or “receiver.” In basic terms, it allowed the researchers to build a qualitative framework to determine to what extent the philosophy, theory and practice of Living School was received, understood and accepted by the school community.

Through the KT model, the researchers were able to establish a paradigm of key messages prevalent in the school community before Living School was implemented, and determine if that paradigm had changed, and to what extent it had changed by the end of implementation. Changes of a significant nature were characterized as a “paradigm shift.” A codebook was developed based on these key messages in order to analyze the content of the community consultations.

Results

1. Community Consultations

One of the key variables of interest in the Living School evaluation was the extent to which participating school communities experienced changes in the way they looked at student health and how it was influenced. In order to quantify this variable, researchers developed a codebook to categorize responses from the community consultations into groups of major influences that would constitute key elements of the Living School Paradigm. The groups of major influences are:

- a. Political, social and community factors: large-scale global influences such as government, media, and community environments.
- b. Home and school factors: local influences such as parental involvement and school policies.
- c. Individual level factors: individual traits and knowledge.

In six out of nine schools, a significant paradigm shift was observed. In five of these schools, the trend was towards an increasing belief in the influence that political, school and community factors could have on health behaviours and attitudes. Overall, there was a more articulate description by the community partners of how school culture and climate had a larger influence on student health than first believed before the implementation of Living School.

In schools that saw a paradigm shift, there was a strong and committed leadership from the principal. The principal was supportive of staff health initiatives and fostered a positive work environment. There was a deeper appreciation in the value of community partners and how to effectively work with them. Paradigm shifts occurred when there was openness to shared leadership between students, parents, public health, and partner agencies.

2. Student Surveys

Overall, students reported an increase in the amount of daily physical activity over the course of the study period, despite the short time frame.

While there were few net changes in the health-related attitudes and beliefs of students between 2004 and 2005, numerous changes were observed in correlations between them. These correlations revolve around two major factors: the students' sense of belonging or attachment to the school and their perception of the school's fairness and safety climate.

3. Teacher Surveys

There was a mean increase in physical activity levels among teachers at all schools with the exception of one. At the end of the implementation, there was a belief among teachers in the ability of the school to influence student health behaviour and attitudes when this influence is compared to the influence of peer groups and the media. Teachers in Living Schools acknowledged the complex interaction of body, mind and spirit. Teacher's also reported an increase in student attentiveness and alertness.

Interpretation

The overall design of the Living School evaluation was intended to assess the net impact of Living School on the school communities into which it was introduced and to examine the outcomes in terms of the extent to which the model was fully implemented in them. Also important is the qualitative data provided by the number of success stories from the pilot school communities. Living School is seen to have influenced the development of new or improved policies, programs, services and interventions.

Taken in their entirety the results of the evaluation reveal Living School as a powerful intervention that influences the culture of schools and the communities they serve. Even in schools where a paradigm shift was not noted, significant policy and program initiatives were implemented.

The research supports the following findings observed in all participating school communities:

1. Growing appreciation of the value of community partners and how to work effectively with them. Community partners felt they had a common vision, model and symbol of comprehensive school health. Living School provided a common framework, structure and process for planning. Some examples of initiatives that

- occurred as a result of Living School include the involvement of public health units in all pilot sites (education, training and provision of resources); recreation partners increased access and reduced barriers to existing programming (free passes, family discounts and free recreation classes for students); University students donated time to instruct new activities and motivate students; and community agencies and business providing workshops or displays.
2. Growing belief in the ability of the school community to influence student health behaviours and attitudes. There was a growing belief amongst Living School teachers in the ability of the school to influence student health behaviour and attitudes when this influence was compared to the influence of peer groups and the media.
 3. Increased physical activity levels and trends toward healthier eating behaviours among both students and teachers. The Research Advisory Group did not expect clearly observable behavioural changes at the student level over the time frame of the evaluation project. The process, they felt, would take longer than the one academic year for these changes to be observed. Qualitative information collected from community consultations and success stories indicates an increase in Daily Physical Activity opportunities for students. Pilot sites have adopted Daily Physical Activity over and above the scheduled physical education classes. Teachers participated in workshops on strategies for building movement and activity into their daily routine. Many sites organized walking clubs where staff and students participated during their lunch hours.
 4. Increased student attentiveness and alertness, increased student attendance and a reduction in behavioural issues. At the community consultations, many school staff reported that students were more visibly alert and attentive, there were fewer behavioural problems in class and on the playground, and attendance had improved.
 5. Increased sense of belonging, attachment and safety in the school community. By the end of the project, students who indicated that they felt a strong sense of belonging or attachment to their schools and felt that their schools were run in a fair and just manner also tended to exhibit a number of other health promoting attitudes and beliefs such as:
 - Greater enthusiasm for physical activity as taught in school.
 - Greater self-acceptance.
 - A greater tendency to see health as an outcome of successful relationships and of being happy.
 - An increased tendency to downplay the importance of physical appearance as away of getting ahead and being popular.
 - A decreased dependence on peer opinions.

Conclusion

Living School is a powerful intervention that addresses comprehensive school health. It provides a framework to allow communities to identify their own resources and use them in the most effective manner. The elementary school community is an ideal setting to gather all community partners and address a topic of a collective vested interest, the health of future generations.

The results of the Living School Pilot Project demonstrate that Living School is a powerful and effective way to transform an environment into a healthy culture. Students felt an increased sense of belonging and safety in school communities where all community partners took a shared responsibility in their well-being. Many students and teachers reported an increase in their daily physical activity levels as more creative opportunities were presented in which to be physically active. There was a connection made between physical and mental health as attentiveness and alertness increased. Teachers and community partners identified that the local school community had more influence over student health than they thought before implementing Living School, even compared to the powerful influence of the media and peers.

After one year, the results of Living School implementation are very promising. More research is needed to determine the longer term effects within a Living School community. A longer time frame would tell if a change in attitudes, beliefs and culture translates into changed health habits. It was not initially hypothesized that physical activity levels would increase over the short time frame of the pilot study, however the fact that they did leads to promising results for the future.

Table 1: Geographical location of pilot site schools and school clusters.

Geographical Region	School or School Cluster	Community
Large Urban City	<ul style="list-style-type: none"> ▪ Our Lady of Victory Catholic Elementary School – Toronto 	Toronto
	<ul style="list-style-type: none"> ▪ Dufferin Mall Cluster (Dovercourt Public School, Montrose Public School, Delta Alternative School, Essex Public School, Hawthorn II Alternative Bilingual School, Dewson Street Junior Public School, Perth Public School – Toronto. 	
Suburban or Mid Sized City	<ul style="list-style-type: none"> ▪ Concord Public School 	Windsor
	<ul style="list-style-type: none"> ▪ Oakville Cluster – Mother Teresa Catholic School, West Oak Public School 	Oakville
	<ul style="list-style-type: none"> ▪ Greensborough Public School 	Markham
Northern City or Town	<ul style="list-style-type: none"> ▪ Bishop Gallagher Senior Elementary School 	Thunder Bay
	<ul style="list-style-type: none"> ▪ Sault Ste. Marie Cluster (Parkland Public School, St. Mary’s French Immersion School) 	Sault Ste. Marie
Rural Setting or Town	<ul style="list-style-type: none"> ▪ Prince Charles Public School 	Quinte West – Trenton
	<ul style="list-style-type: none"> ▪ Shanty Bay Public School 	Shanty Bay

¹ 2004 Chief Medical Officer of Health Report. Healthy Weights, Healthy Lives, Dec. 2004.

² 1998/99 Longitudinal Survey and Children and Youth

³ 2004 Canadian Tobacco Use Monitoring Survey,