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## Supporting active school travel: A qualitative analysis of implementing a regional safe routes to school program



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#### ABSTRACT

Physical inactivity among children is a significant public health concern. Active school travel (AST) methods, such as walking and wheeling to school, can be a valuable way to increase children's levels of daily physical activity. In Canada, Active and Safe Routes to School (ASRTS), a national health promotion initiative, has led the campaign for AST through its flagship school travel plan (STP) program. At present little is known about the onthe-ground implementation processes that impede or facilitate the success of STPs. Through a thematic analysis of 18 interviews with STP facilitators and 4 focus groups with the larger STP committees, our study evaluates the factors shaping the functioning of STP interventions at ten elementary schools participating in a regional ASRTS program in Southwestern Ontario. Our analysis yielded six themes that have implications for STP implementation and sustainability: 1) accounting for school context; 2) establishing committee capacity and leadership; 3) supporting STP action; 4) responsiveness to external and internal barriers; 5) engaging schools at the grassroots level; and 6) building future champions. We draw from Lewin's Field Theory and discuss the forces affecting STP committees to frame our findings in a way that can be discussed to support the building of efficient, effective, and viable AST intervention environments.

#### 1. Introduction

Engagement in physical activity (PA) has important physical (Larsen et al., 2015) and cognitive (Fedewa and Ahn, 2011) health benefits for children. However, 81 percent of adolescents (11–17 years old) worldwide are not attaining sufficient levels of PA (World Health Organization, 2018). Such low levels of PA are doubly concerning considering that habits developed during childhood can transfer into adulthood (Telama et al., 2005). Active school travel (AST), such as walking or cycling to/from school, has been suggested as a key method to improve PA opportunities for children (Sallis et al., 2006). With children under 13 years old spending 15% of all time during an average week in school (Hofferth and Sandberg, 2001), incorporating AST into daily routines has the potential to not only increase children's PA, but also contribute to their overall health by reducing harmful vehicular emissions in the school area (Bearman and Singleton, 2014).

Participation in AST has many potential benefits for children,

including helping children achieve up to 30 percent of the recommended 60 min per day of moderate-to-vigorous PA (van Sluijs et al., 2009). Moreover, increases in children's AST have been associated with increased fitness levels (Lubans et al., 2011), reduced perceived stress (Lambiase et al., 2010), improved mental health (Fyhri and Hjorthol, 2009), and the generation of positive emotions (Ramanathan et al., 2014). However, despite its many potential benefits, AST participation rates have declined internationally (Grize et al., 2010; McDonald, 2007; van der Ploeg et al., 2007). Thus, building regular engagement in AST represents an opportunity for public health practitioners and school communities to address children's physical inactivity.

Factors influencing AST participation are multiple and complex, including distance to school (Emond and Handy, 2012; Larsen et al., 2009, 2012), child age (Bere et al., 2008; Robertson-Wilson et al., 2008), and gender (Evenson et al., 2003; Larsen et al., 2009). For instance, perceptions of traffic safety (Helbich et al., 2016) and social

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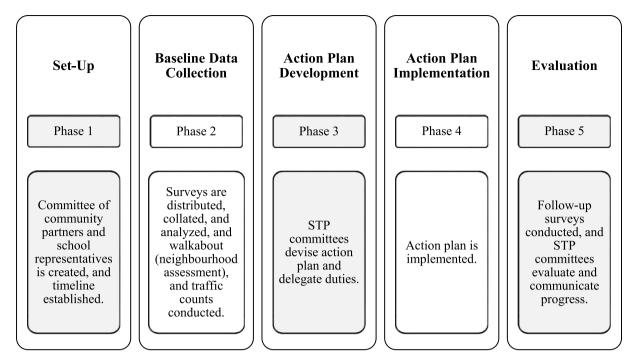


Fig. 1. School travel plan intervention model.

concerns around stranger danger (Panter et al., 2010) and bullying (Zwerts et al., 2010) influence children's rates of walking, while environmental variables, such as block density, signalized intersections (Mitra and Buliung, 2012) and street trees (Larsen et al., 2012) are linked to AST. With community-based organizations, policy-makers, and public health practitioners seeking ways to effectively address these multiple, intersecting influences on AST, a myriad of interventions have been implemented globally (Larouche et al., 2018).

In Canada, Active and Safe Routes to School (ASRTS), a national health initiative developed by Green Communities Canada, adapted the school travel plan (STP) model from international best practices and started piloting AST programs in 2006 (Active and Safe Routes to School, 2018a). Central to the STP intervention are facilitators who play a pivotal role in promoting the program to the school community, establishing a larger STP committee of community partners (e.g., municipal officials, parents, police, principals, public health practitioners), and overseeing the development of a school-specific action plan (Active and Safe Routes to School, 2018b). STP action planning is comprised of five steps (see Fig. 1). Broadly, STPs promote and raise awareness of AST through what ASRTS calls the five 'Es': education, encouragement, enforcement, engineering, and evaluation (Active and Safe Routes to School, 2018c).

Effective AST interventions require cross-sector collaborations. Recent research suggests understanding how cross-sector partners perceive barriers and enablers to active travel assists in improving collaborative efforts (Cole et al., 2010). To our knowledge, however, only a few published studies have investigated the organizational dynamics of partnerships supporting AST interventions. Macridis and García Bengoechea (2015) provide an overview of different partnerships supporting AST programs and document how interventions are facilitated and operationalized. More pointedly, Mammen et al. (2015) examined the perspectives of STP facilitators in the Canadian context and reported that collaboration, an organized model structure, and member involvement positively impacted implementation; subsequently, they called for future case studies to examine STPs in greater depth. Atteberry et al. (2016) and Cooper and McMillan (2010), meanwhile, examined the implementation of the Safe Routes To School program in the U.S. context, with the former, more recent paper recommending that future work investigate the interactions of members within the partnerships and their implications for intervention implementation. Here, we present a detailed evaluation case study of the organizational features shaping the implementation and sustainability of an AST intervention (the STP model) from the perspectives of stakeholders involved, as well as a first attempt to understand AST intervention dynamics using organizational change theory. To guide this study, we asked: 1) How do STP structure, organization, and resources influence the implementation of the STP intervention? and 2) What features of the STP intervention influence its efficacy and sustainability?

#### 1.1. Theoretical framework

Our evaluation examines a fundamental health promotion issue regarding to what extent committees implementing STPs perceive the organizational dynamics and related processes of change to enable and/ or constrain the effectiveness of the STP intervention. We draw on Kurt Lewin's Field Theory of organizational change because it offers a conceptual lens by which to analyze group (STP committee) behavior in a particular setting (STP intervention) (Lewin, 1936). Broadly, Field Theory operates on the premise that behavior is a function of a group's environment or 'field', and by considering the environmental complexities and influence(s) we can understand observed behaviors (Lewin, 1936). The field, though, is time dependent and composed of several interdependent 'forces' (Lewin, 1943) that, in our case of the STP program, include internal group characteristics such as management, personnel, strategies, and structure, as well as external characteristics such as the school and surrounding communities. Force field analysis can subsequently be utilized to identify the specific forces that should be abated or fortified to facilitate a group's desired planned change (Lewin, 1998). Thus, with Field Theory and its force field analysis, we make sense of our findings by conceptualizing the environment of an STP committee and considering the relational dynamics among the forces constraining and facilitating its implementation and sustainability.

Organizational change approaches have been applied in a variety of health-related contexts, including health promoting hospitals (Lee et al., 2014), public health planning (Thomas et al., 2009), and heart health promotion (Riley et al., 2003). Extending an organizational change approach to STP offers the opportunity to investigate how cross-

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