SHAPES
SCHOOL HEALTH ACTION, PLANNING AND EVALUATION SYSTEM

PHYSICAL ACTIVITY LEVELS OF PEI YOUTH

INTRODUCTION

The purpose of this research brief is to provide PEI stakeholders with a new look at findings from three cycles of the School Health Action Planning Evaluation System-Prince Edward Island (SHAPES-PEI) 2010 (n= 6 563), 2012 (n= 8 533), and 2014 (n= 5 621) surveys. Students in grades 5-12 from across Prince Edward Island were asked questions about a variety of health related topics, including physical activity. In this brief, we explore the behaviours of PEI students whose self-reported levels of physical activity during the previous week meant they ***did not*** meet the Canadian Physical Activity (PA) Guidelines.

With thanks to our partners:

University of Prince Edward Island

Prince Edward Island Canada Health and Wellness

Prince Edward Island Canada Education, Early Learning and Culture

WHY PHYSICAL ACTIVITY MATTERS

Physical activity enhances the physiological, cognitive, and social health of children and youth (Poitras et al., 2016). Introducing children to regular physical activity early can lead to the development of healthy exercise habits for life. High levels of physical activity act as a protective factor for children and youth against developing high blood pressure, cholesterol, depression, and obesity (Rhodes, et al. 2013). Decreasing the rates of childhood obesity is important because children who are obese often become obese adults (Kehm, Davey, & Nanney, 2015). Additionally, physical activity has been linked to improved learning, attention, and academic achievement among youth (ParticipACTION, 2016).

CANADIAN YOUTH

Every year, ParticipACTION produces a national 'report card,' assigning grades based on the physical activity levels of Canadian youth. According to their latest (2016) report – and consistent with previous years' findings

CANADIAN PHYSICAL ACTIVITY (PA) GUIDELINES

The Canadian PA Guidelines recommend that children and youth, aged 5-17, participate in at least 60 minutes of moderate-vigorous physical activity every day, as well as strength training activities three days a week, to achieve health benefits. **Moderate** physical activities include walking, biking, and recreational swimming. **Vigorous** physical activities include jogging, team sports, jump-rope and any other physical activities that increase your heart rate and make you breathe hard and/or sweat. Meeting this guideline can help children maintain a healthy weight, improve confidence, and improve academic performance (CSEP, 2015).

ONLY 9% of Canadian children and youth aged 5-17 are meeting the Canadian PA guidelines (ParticipACTION, 2016).

These results are based on **direct measurements using accelerometers**, so they are not directly comparable to data for PEI. However, similar to SHAPES-PEI findings, the ParticipACTION results suggest that the PA levels of youth across the country remain relatively flat.

PEI YOUTH

Based on **self-reported physical activity**, the 2014-15 SHAPES-PEI data indicates that

ONLY 45% of Island youth in grades 5 through 12 are meeting the Canadian PA guidelines.

This finding has remained unchanged over three cycles of data collection (2010 - 2014) *(see Figure 1)*. What this suggests is that, since 2010, **more than half of all PEI youth reported not being active enough to achieve optimal health benefits from physical activity.** Other evidence has suggested that self-reported data can over-estimate the amount and intensity of PA being reported by youth (Ekelund, Tomkinson, & Armstrong, 2011). Yet, despite differences in measurement, reported levels of physical activity amoung PEI youth have remained stable, similar to national findings. Most concerning for PEI is that significant efforts to increase physical activity opportunities for youth have not resulted in any changes in self-reported PA levels since 2010.

% of PEI youth meeting the CDN Physical Activity (PA) Guidelines, 2012-2014

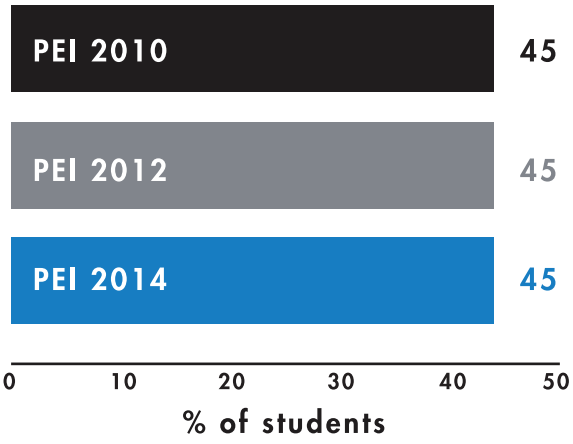

FIGURE1:
PEI 2010 (n= 6 563); PEI 2012 (n= 8 533); PEI 2014 (n=5 621)

What concerns schools, communities, and government partners is how to understand what this plateau really means. Consistently, these partners are recognized for supporting the health and well-being of Island youth through health and physical education curriculum, community PA programing, wellness grants, and much more. The protective effects of such initiatives cannot be under-estimated, as they may account for the maintenance of the physical activity levels of PEI youth during this time. We need to better understand our local data and link these findings to what is known about PA in other jurisdictions.

PEI YOUTH NOT MEETING THE CANADIAN PA GUIDELINES – WHAT DO WE KNOW ABOUT THEM?

The Canadian PA Guidelines were introduced in 2010. Since then, there has been continued concern about the high numbers of Island youth not meeting the guidelines. However, aside from meeting the guidelines, little else has been explored regarding what is known about the physical activity behaviours of Island youth. As such, this brief attempts to address the need for a deeper dive into the SHAPES-PEI physical activity data. Since 55% of the PEI youth are consistently ***not*** meeting the PA guidelines, we wanted to know more about their actual levels of physical activity. To do that, we looked at how many days a week these youth are accumulating 60 minutes of physical activity *(note: reported strength training was not included in this analysis)*.

Of the 55% of youth who do not meet the PA guidelines, **nearly 30% reported being active for 60 minutes 4 to 6 days of the week** *(see Figure 2)*. **In other words, since 2010, more than half of PEI students not meeting the PA guidelines are being active most days of the week.**

% of PEI youth active for 60mins/day, last 7 days, 2010-2014 (overall)

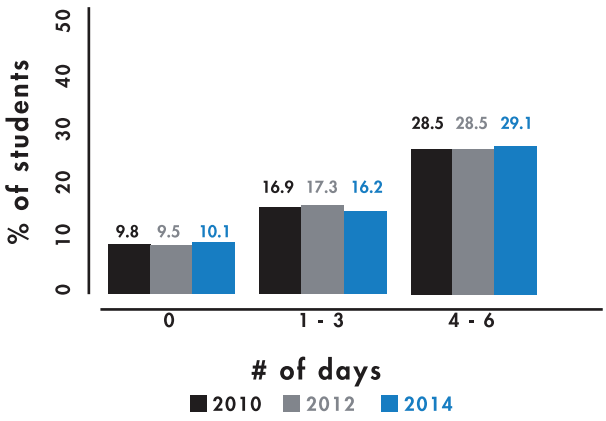

FIGURE 2:
PEI 2010 (n=2 734), PEI 2012 (n=3 498), PEI 2014 (n= 2 343)

In contrast, approximately

10% of youth consistently reported not being active for 60 minutes any day of the week.

These findings suggest a need to move beyond this simple understanding of meeting PA guidelines, towards further analysis that considers how to report findings in more meaningful and actionable ways for our stakeholders.

There has been a consistent difference, over three cycles of data collection (2010- 2014), in the number of male and female youth meeting the PA guidelines (52% males vs. 37% females). This finding is consistent with other literature that suggests notable gender differences in physical activity levels, both in and outside of school, are affected by a variety of factors, such as income, extracurricular sport engagement, and school stage (De Baere, Seghers, Philippaerts, De Martelaer, & Lefevre, 2015; Mayorga-Vega & Viciana, 2015). However, when we looked at the physical activity levels of the 55% of PEI youth who did not meet the PA guidelines *(see Figures 3 and 4)*, we see there is less of a gender difference in youth who reported being active for 60 minutes most days of the week (44-46% of males; 48- 53% of females).

% of PEI youth active for 60mins/day, last 7 days, 2010-2014 (males)

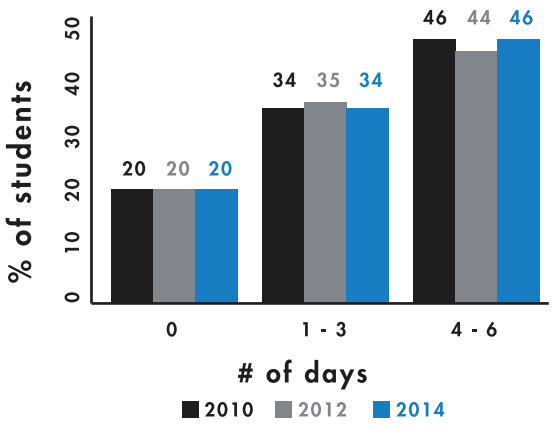

FIGURE 3:
PEI 2010 (n=1 561), PEI 2012 (n=1 860), PEI 2014 (n= 1 234)

% of PEI youth active for 60mins/day, last 7 days, 2010-2014 (females)

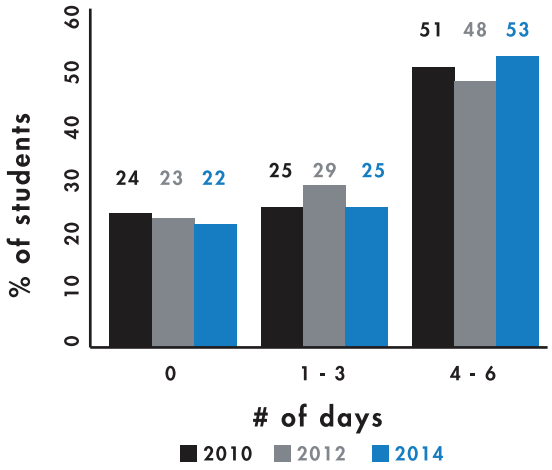

FIGURE 4:
PEI 2010 (n=2 021), PEI 2012 (n=2 543), PEI 2014 (n= 1 661)

PHYSICAL ACTIVITY (WEEKDAYS AND WEEKENDS)

Our findings also show that PEI youth who are not meeting the PA guidelines report being less active on the weekends than during the week. **Sunday was found to be the least active day of the week.** In 2014, of youth who did not meet the PA guidelines, only 26% reported being active for at least 60 minutes on Sunday. In contrast, **Monday was reported to be the most active day of the week**, with 41% of students being active for at least 60 minutes that day *(see Figure 5)*. These findings are consistent with other research, which found that moderate to vigorous physical activity for youth was 30% lower on weekends than on weekdays (Comte et al, 2012). These findings point to the need for families to be partners with schools, communities and the government to address this very complex issue.

SEDENTARY BEHAVIOUR

Sedentary behaviour (SB) includes awake behaviours, done while sitting or reclined, that require very little energy (LeBlanc et al., 2015). Some examples of sedentary behaviour include screen time, such as watching TV, surfing the internet, and playing video games. Among youth, high levels of screen time are connected with low levels of healthy eating. In addition, high levels of sedentary behaviour impact the amount of sleep youth are getting (Leblanc, 2015). Encouraging children and youth to be more physically active can help increase their level of physical activity and reduce time spent being sedentary, while also promoting health. In fact, it has been found that limiting sedentary behaviour in youth can increase self-esteem, academic achievement, and improve fitness levels (Tremblay et al., 2011).

THE CANADIAN SEDENTARY BEHAVIOUR (SB) GUIDELINES

The Canadian SB Guidelines (CSEP, 2015) suggest that, to achieve health benefits, **children and youth aged 5-17 should minimize time spent being sedentary during the day.** This may be achieved by: limiting recreational screen time (which should not exceed 2 hours per day) and limiting sedentary modes of transportation, extended sitting, and time spend indoors throughout the day.

% of PEI youth active for at least 60mins, by day of the week (last 7 days), 2014

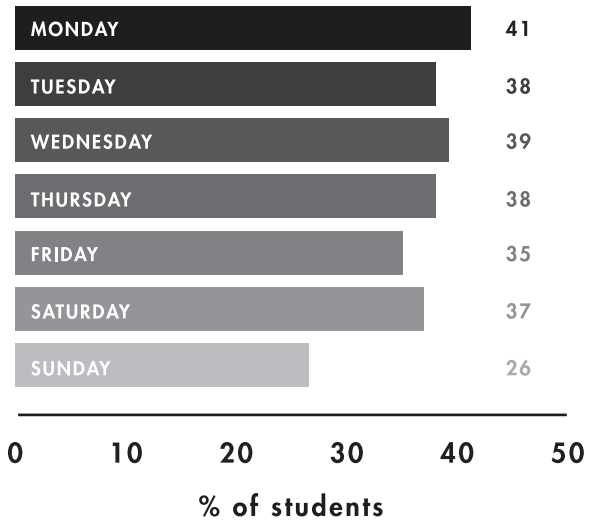

FIGURE 5:
PEI 2014 (n=2 343)

In 2014-15, SHAPES-PEI asked youth about their use of TVs, computers, and video games.

76% of PEI youth reported engaging in more than 2 hours of screen time a day.

In addition, youth who did not meet the PA guidelines in 2014-15 were more likely to exceed the Sedentary Behaviour guidelines as compared to youth who met the PA Guidelines. **Nationally 76% of children and youth aged 5-17 are exceeding the Sedentary Behaviour guidelines (ParticipACTION, 2015).**

THE ROLE OF SOCIAL SUPPORTS

Social support networks are important influences on the lives and behaviour choices of children and youth. Parents and friends play an important role in impacting physical activity levels of PEI youth. Our data has demonstrated that **more than 90% of Island youth consistently report having parents who are 'supportive' or 'very supportive' of them being physically active.** In addition, **more than 50% of the youth surveyed reported having 4 or more close friends who are physically active.** However, despite having strong social supports, Island youth are still not being active enough throughout the week to meet the PA guidelines. Social supports alone are not enough to get youth moving; the surrounding environment must also support physical activity. Previous studies in areas such as tobacco reduction (Corsi, Subramanian, Lear, Chow, Teo,

& Boyle, 2013), bicycle helmet use (Davison, Torunian, Walsh, Thompson, McFaull, & Pickett, 2013), and use of seatbelts (Shults, Haegerich, Bhat, & Zhang, 2016) have also found that complex public health problems – not unlike physical activity – need to be addressed comprehensively (at the individual, family, community and policy level) in order to bring about behavioural changes and create new cultural norms.

TAKE AWAY MESSAGES

Physical activity is a complex health behaviour that is impacted by social, environmental, biological, and demographic factors. Since 2010, 45% of Island students have reported being active enough to meet the Canadian PA guidelines. The number of Island students being active enough to meet the guidelines has reached a plateau over the past three data collection cycles. Yet, given the intractability of this issue, the plateau should be viewed as a success on part of those working hard to get PEI youth active. **Without continual support and promotion of physical activity through policy, wellness programs, and school/community efforts, the PA levels of youth could worsen, rather than stay the same.** Therefore, the efforts already in place need to be commended; reported physical activity levels have not been decreasing in PEI, despite ever increasing challenges posed by screen time and other sedentary activity choices.

However, it is also critical to recognize that a large proportion of PEI youth not meeting the PA guidelines are still being active most days of the week. Therefore, a focus on how to support moving this group of youth forward, to reach the activity targets set out by the PA guidelines, is important. Further research is needed to understand how best to do this. In addition, the approximately 10% of youth who report limited to no time spent being active are also of particular concern. We need to better understand how to support and motivate these youth to move from a primarily sedentary lifestyle to one that includes regular physical activity.

Our research demonstrates the importance of monitoring youth PA levels so that trend data can be addressed in a manner that links policy and programming within schools and community. We see this plateau in physical activity levels as a key youth health outcome that needs to be monitored over time. These findings suggest that physical activity levels remain a public health priority for PEI, which is consistent with concerns nationally. Further work is required to monitor and address the impacts of policy and programming that addresses youth activity levels on weekends, with family, and in community settings

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