Ten-year trends in overweight/obesity among Ontario middle and high school students and their use in establishing baseline measures for government reduction targets

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ABSTRACT

OBJECTIVES: Public health concern about increasing levels of child/youth overweight and obesity has resulted in initiatives to address this issue. In 2012, the Ontario Ministry of Health and Long-Term Care (MOHLTC) established a target to reduce childhood obesity by 20% within five years. In this paper, we examine trends and establish baseline levels of overweight/obesity to assess the impacts of population-level interventions.

METHODS: We analyzed 10 years (2003–2013) of data accumulated from six cycles of the Ontario Student Drug Use and Health Survey using logistic regression to assess trends in the prevalence of overweight/obesity among middle and high school students. The 2013 data are used to begin monitoring progress toward achieving the MOHLTC target.

RESULTS: From 2003 through 2013, the prevalence of overweight/obesity among middle school students in the province remained stable overall and among all subgroups except 7th-grade females, who showed a significant linear decline. Among high school students, the prevalence of overweight/obesity showed a significant linear increase and an increase among 11th graders, females, and 10th- and 11th-grade females specifically. The prevalence remained stable but elevated among 9th- and 12th-grade females as well as among males in all grades. In 2013 (baseline for the MOHLTC target), 25.1% of students in grades 7–12 were overweight or obese, implying a presumed 2018 target of 20.1%.

CONCLUSION: Ten-year trends in overweight/obesity indicate stability among males and significant linear increases in some female subgroups. Also, baseline data (2013) will facilitate the monitoring of future interventions aimed at achieving the 2018 MOHLTC target.

KEY WORDS: Obesity; overweight; trends; students

La traduction du résumé se trouve à la fin de l'article.

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Widespread concern in the public health community about increasing levels of overweight and obesity among children and youth has resulted in the development of a number of policy and program initiatives designed to address this problem in Canada and elsewhere.^{1–4} For example, in 2012, the Ontario government established the ambitious target of reducing childhood obesity by 20% within five years.⁵ Subsequently, the Ministry of Health and Long-Term Care (MOHLTC) established the Healthy Kids Panel, which outlined a strategy for achieving this target by the year 2018 through a number of approaches aimed to benefit children and youth.⁶ More recently the Ministry announced funding to 45 communities in Ontario for the Healthy Kids Community Challenge, designed to address the issue of childhood obesity through community-based interventions to promote physical activity, healthy eating and adequate sleep.⁷ Given the health concerns regarding child obesity and governmental responses to address this issue, it is important to ensure that overweight and obesity levels among children and youth are tracked over time, and that policy and program interventions, including natural experiments,⁸ are assessed in relation to stability and change in prevalence.^{8–10}

Shield's earlier (2006) study on trends in Canada, using the International Obesity Task Force (IOTF) criteria, describes large and significant increases in the prevalence of overweight and obesity (based on direct measures of height and weight in calculating body mass index [BMI]) among youth (aged 12–17) between 1978–79 (14% combined overweight and obesity) and 2004 (29% combined).¹¹ A more recent assessment of obesity

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among Canadian youth (aged 12–17), based on the 2009 and 2011 waves of the Canadian Health Measures Survey, indicates the prevalence of combined overweight and obesity to be 26.9% (IOTF cut-points) or 30.1% (World Health Organization [WHO] cut-points) with higher levels among males.¹²

There have been no representative Ontario-level reports of trends in overweight/obesity for specific age by sex subgroups of children and youth based on either directly measured or self-reported height and weight. For example, while provincial estimates based on self-reported data from the Canadian Community Health Survey are analyzed in broad age groups (e.g., 12–17), the sample size is not sufficient to provide stable estimates within age and sex subgroups. In this paper we have two objectives. First, we examine 10-year (2003–2013) trends in the prevalence of overweight or obesity derived from self-reported height and weight among Ontario youth, based on data from the Ontario Student Drug Use and Health Survey (OSDUHS) and using the IOTF criteria cut-points. This trend analysis provides the context for our second objective. We establish data from the 2013 cycle of the survey to serve as baseline for subsequent tracking of progress in attaining the MOHLTC's 20% reduction target and for the assessment of provincial-level interventions designed to reach that target.

METHODS

Study design

Our trend analyses were conducted using a stacked dataset accumulating six cycles for the period covering surveys in years 2003, 2005, 2007, 2009, 2011 and 2013. Self-reported height and weight data were collected during each of these survey years. The multi-year microdata contain information on 38,407 students enrolled in 778 schools (stage 1 primary sample unit clusters) distributed among 78 region-by-school level-by-year strata. See Kish¹³ and Korn and Graubard¹⁴ for more detail on combining multiple complex surveys. Each cycle was based on a target sample of 7th–12th graders enrolled in provincially funded English and French language schools in the public and Catholic school sectors in Ontario. Students excluded as being out-of-scope were those in private schools; those schooled in correctional or health facilities; students schooled on First Nations reserves, military bases and in remote areas of Northern Ontario; and the few who were home-schooled. These exclusions represented roughly 8% of all Ontario children and adolescents aged 12 to 18. Each cycle was selected by means of a stratified, two-stage (school then class) cluster design. In stage 1, schools (stratified by region and school level) were selected by systematic random sampling according to probability-proportionate-to-school size, followed by a within-school selection of one class per stratified grade selected with equal probability.

For the period under study, the school response rate (number participating/number selected) varied from 49% to 71% (mean = 60%), the class response rate varied from 80% to 98%, and the conditional (on school and class participation) student response rate (number participating/number of students enrolled in recruited classes) fell from 72% to 63% and was strongly related to an increase in the loss of parental consent, which rose from

16% to 26% (an increase that occurred among all grades and regions).¹⁵ An appraisal of the potential nonresponse bias in the 2013 cycle showed very few differences in key health indicators (e.g., drug use, mental health, physical health) between the 294 classes with a response rate 70% or higher versus the 377 classes with lower response rates.¹⁵

In each cycle, active parental consent and student assent procedures were required. To maximize data collection during a fixed (regularly scheduled) classroom period while minimizing the number of items per questionnaire, the OSDUHS uses two forms, which are distributed alternately in classrooms. Students completed the paper-pencil questionnaires anonymously during regular class time. Staff from the Institute for Social Research at York University administered the questionnaires and processed all data. Each cycle of the OSDUHS was approved by the Research Ethics Boards of the Centre for Addiction and Mental Health, and York University.

Measures

For students aged 12–18, overweight/obesity status was derived from age- and sex-specific self-reported height and weight, from which BMI was computed and applied to the IOTF-defined classifications (Cole/IOTF). For students aged 19 years or older, weight status was based on the international classification of adult weight status (http://apps.who.int/bmi/index.jsp?introPage=intro_3.html).

In the three cycles between 2003 and 2007 the height and weight questions were included in one of the two questionnaire forms, presented in an open-ended response format. Students recorded their numeric weight in pounds or kilograms and their height in feet or centimetres. Beginning in 2009, the height and weight questions were included in both questionnaire forms. Also, beginning in 2007, the questionnaire used pre-coded response options. The height question provided 27 options in feet/centimetres. The weight question provided 42 options in 5 lb (or equivalent kilogram) intervals. Using the midpoint of the height and the weight response categories, BMI was calculated as weight in kilograms divided by height in metres squared. Students without valid height or weight information were excluded from the analysis. The proportion of missing height or weight in 2003 and 2005 was 9.6% and 8.8% respectively of the estimation sample. Missing height and weight between 2007 and 2013 ranged from 4.6% to 6.2% of the estimation sample. Further details regarding OSDUHS methodology can be accessed at <http://www.camh.ca/research/osduhs.aspx>.

Statistical analysis

Our analyses employed design-based methods to account for the complex survey data of the OSDUHS. This estimation differs from non-survey analysis in two respects. First, pseudo-maximum likelihood estimation is employed in the estimation of point estimates (because the assumptions of ordinary maximum likelihood estimation are violated with stratified, clustered data) and, second, Taylor series linearization is employed in the estimation of variances.^{14,16} Sample weights were used in all analyses to account for the unequal inclusion probabilities due to disproportional stratification and sponsored oversampling of select regions, and for nonresponse and sex/grade/region

post-stratification adjustments. To estimate provincial trends, for each logit model the binary overweight/obesity response was regressed on four factors – a linear and quadratic time trend, and sex and grade covariates. Both linear and quadratic terms are presented. In addition to time factors, sex and grade (measured by a single binary indicator [G7 vs. G8] for the middle school subsample and three dummy variables representing grades 10 through 12 [vs. G9] for the high school subsample) were modeled as covariates. Subsamples were selected using the subpopulation selection methods necessary to achieve correct variance estimates,¹⁷ and normalized weights scaled to the number of respondents were applied for multi-year analysis.¹⁴ The analytic sample size was 36,058 (38,407 minus 2,349 with missing data). All analyses were computed using complex survey estimation procedures implemented in Stata version 13.¹⁸

RESULTS

Trends in overweight/obesity among middle school students

Table 1 summarizes the results of our trend analyses among middle school students. From 2003 through 2013, no significant change occurred in the provincial prevalence of overweight/obesity (21.2%–21.6%). Moreover, this finding held across all sex, grade and grade-sex subgroups, except 7th-grade females, whose prevalence of overweight/obesity showed a significant linear decline from 23.9% in 2003 to 15.8% in 2013.

Trends in overweight/obesity among high school students

The results of our trend analyses among high school students are presented in Table 2. From 2003 to 2013, the provincial prevalence of overweight/obesity showed a weak but statistically significant linear increase (23.7%–26.1%). Significant linear increases were also evident among 11th graders (22.4%–28.9%), females (17.1%–22.4%), and 10th (14.8%–24.2%) and 11th-grade females (17.0–25.2%). However, the prevalence of overweight/obesity held steady from 2003 through 2013 among 9th- and 12th-grade females as well as among males in all grades.

Baseline overweight/obesity in relation to the MOHLTC reduction target

On the basis of the 2013 OSDUHS data, 25.1% (95% confidence interval: 23.5–26.7) of students in grades 7 through 12 were classified as overweight or obese (Figure 1). We used this prevalence estimate as the baseline to set a presumed target of 20.1%, representing the 20% improvement in five years set by the provincial government. The provincial picture at baseline masks substantial subgroup variability in the prevalence of overweight/obesity in 2013. For example, among middle school students, 7th- (15.8%) and 8th-grade (17.3%) females surpassed the provincial target; however, 7th- (26.2%) and 8th-grade (26.6%) males did not. Among high school students, only 12th-grade females (19.7%) met the target, and 9th-grade females (21.1%) were near to the target set for 2018. Overweight/obesity levels among females in the 10th (24.2%) and 11th (25.2%) grades, as well as among males in the 9th (26.9%), 10th (31.2%), 11th (32.5%) and 12th (28.1%) grades, were higher than the specified goal (Figure 1).

Table 1. Trends in the prevalence of overweight/obesity (IOTF defined) among Ontario middle school students, Ontario Student Drug Use and Health Survey, 2003–2013, *n* = 11,326

	2003		2005		2007		2009		2011		2013		p value for linear trend (2003–2013)		p value for quadratic trend (2003–2013)	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)				
Overall	21.2	(17.4–25.6)	23.4	(20.4–26.6)	24.4	(21.4–27.4)	25.5	(22.9–28.2)	26.4	(23.4–29.4)	27.3	(24.3–30.3)	0.632		0.346	
Females	19.6	(14.8–25.5)	20.1	(15.3–23.1)	20.8	(16.1–26.5)	20.6	(17.5–24.2)	20.4	(18.0–23.0)	20.4	(18.5–25.1)	0.092		0.278	
Males	23.2	(17.8–29.5)	27.3	(22.4–32.9)	28.8	(23.1–34.5)	29.9	(26.3–33.9)	24.7	(21.7–28.0)	24.7	(21.6–31.9)	0.461		0.601	
Grade 7	23.3	(17.9–29.8)	21.2	(17.8–25.1)	22.2	(17.7–27.6)	23.5	(20.0–27.4)	19.7	(16.1–24.0)	19.7	(17.0–25.9)	0.372		0.901	
Grade 8	19.1	(14.8–24.4)	25.3	(20.6–30.6)	27.5	(23.3–31.8)	27.4	(24.4–30.6)	20.9	(18.0–24.2)	20.9	(19.2–25.2)	0.875		0.116	
Grade 7 females	23.9	(16.4–33.6)	19.3	(12.2–23.3)	18.5	(12.2–23.3)	18.9	(14.4–24.5)	15.9	(11.9–20.8)	15.9	(12.1–20.5)	0.044		0.839	
Grade 8 females	15.1	(9.7–22.8)	20.8	(15.7–27.0)	18.5	(13.2–24.7)	22.3	(18.6–26.4)	15.8	(11.7–21.1)	15.8	(12.5–23.4)	0.694		0.148	
Grade 7 males	22.5	(16.3–30.2)	25.5	(19.4–32.7)	27.7	(21.9–34.3)	27.7	(21.9–34.3)	23.5	(18.6–29.3)	23.5	(18.1–36.4)	0.607		0.870	
Grade 8 males	23.7	(17.4–31.6)	28.8	(21.2–37.8)	22.3	(16.8–27.8)	32.1	(28.2–36.2)	25.8	(21.6–30.5)	26.6	(22.2–31.5)	0.575		0.478	

IOTF defined, International Obesity Task Force body mass index cut-offs; CI, confidence interval. 2003–2007 cycles based on half samples; sample sizes are unweighted; prevalence rates are weighted estimates; trend analyses are based on logistic regression modeling linear and quadratic time effects with sex and grade covariates.

Table 2. Trends in the prevalence of overweight/obesity (IOTF defined) among Ontario high school students, Ontario Student Drug Use and Health Survey, 2003–2013, *n* = 24,732

	2003			2005			2007			2009			2011			2013			<i>p</i> value for quadratic trend (2003–2013)
	%	(95% CI)	<i>n</i>	%	(95% CI)	<i>n</i>	%	(95% CI)	<i>n</i>	%	(95% CI)	<i>n</i>	%	(95% CI)	<i>n</i>	%	(95% CI)	<i>n</i>	
Overall	23.7	(21.6–26.0)	2112	23.9	(21.7–26.2)	2558	24.6	(22.5–26.8)	2170	25.2	(23.5–26.9)	5649	27.3	(24.5–30.2)	6249	26.1	(24.2–28.0)	5994	0.022
Females	17.1	(14.7–19.8)	1093	17.7	(15.0–20.8)	1327	17.8	(15.2–20.6)	1075	19.9	(18.0–22.1)	2921	23.1	(20.1–26.4)	3404	22.4	(20.2–24.6)	3381	0.924
Males	30.5	(27.2–34.1)	1019	29.6	(26.4–32.9)	1231	30.5	(27.3–34.0)	1095	30.0	(27.1–33.1)	2728	31.1	(27.8–34.7)	2845	29.6	(26.6–32.7)	2613	0.935
Grade 9	24.0	(19.9–28.6)	556	23.6	(19.8–28.0)	633	23.2	(19.4–27.4)	521	26.1	(22.9–29.5)	1375	27.2	(22.1–33.1)	1632	24.0	(21.2–27.1)	1476	0.564
Grade 10	23.8	(19.8–28.3)	533	23.0	(19.6–26.7)	637	26.3	(22.3–30.9)	509	25.8	(23.0–28.9)	1504	27.7	(23.7–32.1)	1508	27.8	(23.8–32.1)	1506	0.094
Grade 11	22.4	(18.6–26.8)	540	24.9	(21.5–28.7)	683	25.6	(21.7–29.9)	576	25.4	(21.7–29.5)	1343	28.7	(25.0–32.6)	1508	28.9	(25.3–32.8)	1534	0.008
Grade 12	24.9	(20.2–30.3)	483	24.0	(20.1–28.4)	605	23.6	(19.9–27.7)	564	23.8	(20.7–27.2)	1427	25.9	(22.2–30.1)	1601	24.2	(21.3–27.4)	1478	0.884
Grade 9 females	20.2	(16.5–24.4)	282	15.8	(12.1–20.3)	342	17.0	(12.8–22.2)	254	20.9	(15.3–27.8)	716	22.8	(16.2–31.0)	856	21.1	(17.5–25.1)	850	0.139
Grade 10 females	14.8	(10.9–19.8)	293	15.9	(11.9–20.8)	340	18.5	(13.8–24.4)	241	21.5	(18.1–25.3)	773	24.8	(19.1–31.7)	823	24.2	(20.8–27.9)	842	<0.001
Grade 11 females	17.0	(12.5–22.6)	273	23.9	(18.4–30.5)	340	18.2	(13.2–24.6)	285	20.0	(16.8–23.7)	712	24.9	(20.0–30.6)	842	25.2	(20.3–30.8)	884	0.676
Grade 12 females	16.7	(11.8–23.0)	245	15.2	(10.3–21.8)	305	17.5	(13.1–22.9)	295	17.9	(13.6–23.1)	720	20.6	(17.2–24.4)	883	19.7	(16.3–23.7)	805	0.092
Grade 9 males	27.9	(20.3–36.9)	274	30.9	(25.5–36.9)	291	28.8	(22.8–35.6)	267	30.9	(27.2–34.9)	659	31.5	(26.2–37.2)	776	26.9	(22.1–32.3)	626	0.749
Grade 10 males	34.5	(27.9–41.9)	240	29.7	(25.0–34.7)	297	33.2	(27.3–39.6)	268	30.0	(25.7–34.7)	731	30.4	(24.8–36.8)	685	31.2	(24.8–38.3)	664	0.660
Grade 11 males	27.8	(22.7–33.5)	267	25.9	(21.0–31.6)	343	32.3	(26.5–38.7)	291	30.5	(24.4–37.4)	631	32.2	(26.2–38.8)	666	32.5	(27.7–37.7)	650	0.114
Grade 12 males	32.4	(25.0–40.8)	238	31.2	(25.4–37.8)	300	28.5	(23.3–34.2)	269	29.0	(24.4–34.0)	707	30.6	(25.0–36.9)	718	28.1	(24.2–32.3)	673	0.841

Note: IOTF defined, International Obesity Task Force body mass index cut-offs; CI, confidence interval.

2003–2007 cycles based on half samples; sample sizes are unweighted; prevalence rates are weighted estimates; trend analyses are based on logistic regression modeling linear and quadratic time effects with sex and grade covariates.

DISCUSSION

While the results of our trend analyses indicate that the prevalence of overweight/obesity stabilized among select demographic subgroups between 2003 and 2013, the prevalence in 2013 remained elevated, especially among males (range: 26.2% of 7th graders to 32.5% of 11th graders). The higher prevalence of overweight/obesity among males is consistent with other studies of this age group,^{1,11} raising questions regarding the reasons for this finding as well as challenges around how best to address the issue. Of equal concern is the increasing prevalence in overweight/obesity between 2003 and 2013 among particular subgroups, including grade 10 and 11 females. Only grade 7 females were found to have a lower prevalence during the 10-year period. While this finding is difficult to explain, it may suggest a positive change and needs to be confirmed by examining trends in future waves of the survey.

The results contrast with a recent study on trends in the prevalence of obesity in the US, which found no significant increases in prevalence among youth (aged 12–19) between 2003–2004 and 2011–2012.¹⁹ Although the prevalence in that study is elevated from a public health standpoint (20.5% obesity and 34.5% combined overweight or obesity based on directly measured height and weight and the Centers for Disease Control and Prevention [CDC] growth charts in 2011–2012), youth obesity appears to have plateaued in that country, although further data points are required to confirm this.

The results of our analyses indicate that, as of 2013, females in the 7th, 8th, 9th and 12th grades are currently well positioned relative to the MOHLTC presumed five-year target of 20.1%. However, 10th- and 11th-grade females and males in all grades are poorly positioned relative to the target. Will the current cohort of 7th- and 8th-grade females continue to maintain and carry forward a lower prevalence of overweight and obesity as they transition to secondary school? Or will this group trend upward with increasing school grade/age? If the 7th and 8th grade males carry forward their current rates of overweight and obesity (26.2% and 26.6% respectively), will they resemble and replace the 2013 cohort of overweight/obese male high school students or trend downwards, given a range of initiatives at the federal, provincial/territorial and municipal levels? These are questions that the current trend analyses raise. The results also suggest that if the MOHLTC five-year target is to be realized substantial policy and practice initiatives will be required. A factor related to the context of these analyses is that the 2018 target year established in the Healthy Kids Panel report⁶ may subsequently be extended by the MOHLTC, since interventions to address childhood overweight and obesity are unfolding over time. In any case, our use of the 2013 OSDUHS serves as an appropriate baseline for ongoing monitoring of this age group.

An important issue relevant to policy and programs is the need for more specific clarification around the provincial government targets. For example, while the target of a 20% reduction of child obesity within five years is based on a provincial reduction in overweight/obesity prevalence, it is not clear whether this target also applies within particular age or age/sex subgroups. This is an important issue for those evaluating progress on the target outcome. We found in our analysis that provincial stability and

Figure 1. Prevalence of overweight/obesity (based on International Obesity Task Force cut-offs) among Ontario middle and high school students, Ontario Student Drug Use and Health Survey (SDUHS), 2013

Note: The red line at 25.1% represents the baseline prevalence of overweight/obesity among 7th–12th grade students in the 2013 OSDUHS. The green line at 20.1% represents the 20% decrease (from 2013) that the Ontario Government is attempting to achieve by 2018.

change in levels of overweight and obesity mask cohort differences by grade and sex. In particular, it may be important for the provincial government to consider developing and monitoring different targets for different cohorts. Similarly, it is important to monitor potential harms associated with a focus on reducing overweight and obesity, for example, trends in the prevalence of poor body image, obesity-related stigma, and bullying and disordered eating in this population.²⁰ In addition, emphasis should be placed on monitoring contextual and environmental factors that encourage positive health behaviours, including healthy weights.²¹ Several relevant variables (e.g., body image, weight control, use of diet pills, fruit and vegetable consumption, physical activity and sedentary behaviour) are available in the OSDUHS data.

Our findings must be appraised in light of the study limitations. First, the findings are based on calculations of BMI from self-reported height and weight, which tend to underestimate levels of overweight and obesity in comparison to direct physical measures.^{10,22–25} Second, it was not possible to conduct separate analyses for overweight and obesity because of an insufficient number of cases in specific age and sex subgroups. Existing studies that analyze overweight and obesity separately normally need to combine ages into broader age categories.^{1,11,12,19}

A third limitation is that there were a few inconsistencies in the data. For example, in 2007, grade 7 and 8 females had higher rates of overweight/obesity than males – a finding that runs counter to the results from other years. We cannot explain specific examples of inconsistency in the data. However, we acknowledge that changes in how the data were collected in 2007 may partly explain this. According to the most recent OSDUHS report,^{15 p.49} “experimental work on the OSDUHS showed that the pre-coded format reduced missing value responses versus open-ended formats”. This may have had some effect on inconsistencies in the earlier (prior to pre-coding) years.

A fourth limitation is that the inclusion of secondary school students over age 18 does not correspond directly to the upper end of the MOHLTC target (presumably age 17 or 18). However, the OSDUHS estimates based on grade level do correspond to various stages in the life course and student “career”. Thus it is useful to retain the grade subgroup sample (including those 18+) in the analysis of overweight/obesity over time. Furthermore, the MOHLTC is not conclusive in its designation of the age range targeted in its goal.

As mentioned earlier, we applied the IOTF criteria cut-points to categorize overweight and obesity status. Comparisons among the WHO, IOTF and CDC cut-points, based on directly measured height and weight, found that both the IOTF and CDC cut-points underestimate the prevalence of overweight and (especially) obesity among children and youth.¹⁰ While current research on the prevalence of population overweight and obesity has yet to accept a single classification system, the IOTF criteria were the most frequently used in a recent systematic review of the prevalence of overweight and obesity in adolescents aged 10–19.²⁶ The recent scientific literature acknowledges that both the IOTF and WHO criteria can be used to assess BMI among children and youth.^{1,10,12} In summary, both the IOTF and WHO criteria have been recommended for assessment of trends in the prevalence of overweight and obesity.^{10,27}

The strengths of our study include the use of representative samples of Canadian middle and high school students at a provincial level and the assessment of overweight/obesity at biennially repeated intervals over a 10-year period. Moreover, repeated data allow one to construct evaluation models not only with both pre and post data points but also with multiple pre-program data points, which would strengthen the interpretation of program effect. Lastly, the sufficiently large samples allow for the identification of subgroups that may be less likely to achieve target reduction objectives.

In summary, this study documents 10-year trends in overweight and obesity among Ontario middle and high school students. These patterns indicate provincial stability in the prevalence of overweight/obesity among middle school students and a statistically significant provincial increase for high school students. In addition, the study demonstrates the potential contribution of an existing data system capable of monitoring progress on meeting the MOHLTC target. Finally, it demonstrates the need to investigate subgroup variation, which may not only mitigate the ability of achieving the desired target but would also identify groups in need of enhanced or tailored policy and program interventions.

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RÉSUMÉ

OBJECTIFS : Le problème de santé publique que représentent les niveaux croissants de surpoids et d'obésité des enfants et des jeunes a donné lieu à des initiatives pour aborder la question. En 2012, le ministère de la Santé et des Soins de longue durée (MSSLD) de l'Ontario a établi une cible de réduction de l'obésité juvénile de 20 % dans un délai de cinq ans. Dans notre article, nous examinons les tendances et établissons les niveaux de référence du surpoids/de l'obésité afin d'évaluer les impacts d'interventions populationnelles.

MÉTHODE : Nous avons analysé par régression logistique 10 années (2003–2013) de données accumulées lors de six cycles du Sondage sur la consommation de drogues et la santé des élèves de l'Ontario afin d'évaluer les tendances de la prévalence du surpoids/de l'obésité chez les élèves des premier et deuxième cycles du secondaire. Nous utilisons les données de 2013 pour commencer à surveiller les progrès réalisés en vue d'atteindre la cible du MSSLD.

RÉSULTATS : De 2003 à 2013, la prévalence du surpoids/de l'obésité chez les élèves du premier cycle du secondaire dans la province est restée stable dans l'ensemble et dans tous les sous-groupes sauf celui des filles de 7^e année, où elle a présenté une diminution linéaire significative. Chez les élèves du deuxième cycle du secondaire, la prévalence du surpoids/de l'obésité a présenté une augmentation linéaire significative, en particulier chez les élèves de 11^e année, chez les filles et chez les filles de 10^e et de 11^e année. La prévalence est restée stable mais élevée chez les filles de 9^e et de 12^e année ainsi que chez les garçons de toutes les années. En 2013 (la base de référence pour la cible du MSSLD), 25,1 % des élèves de la 7^e à la 12^e année étaient en surpoids ou obèses, ce qui implique une cible présumée de 20,1 % en 2018.

CONCLUSION : Les tendances sur 10 ans du surpoids/de l'obésité indiquent une stabilité chez les garçons et une augmentation linéaire significative dans certains sous-groupes de filles. De plus, les données de référence (2013) faciliteront le contrôle des futures interventions visant à atteindre la cible du MSSLD en 2018.

MOTS CLÉS : obésité; surpoids; tendances; étudiants