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V. Nadalin, L.D. Marrett, C. Cawley, L.M. Minaker, S. Manske

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Intentional tanning among Adolescents in seven Canadian provinces: provincial comparisons (CRAYS 2015)

Authors: Nadalin V[1], Marrett LD[2], Cawley C[2], Minaker LM[3], Manske S.[3,4]

[1]Population Health and Prevention, Cancer Care Ontario; [2]Aboriginal Cancer Control Unit, Cancer Care Ontario; [3]Propel Centre for Population Health Impact, University of Waterloo; [4]School of Public Health & Health Systems, University of Waterloo

Corresponding author:

Victoria Nadalin, Senior Research Associate

Cancer Care Ontario, 620 University Avenue, Toronto, Ontario M5G 2L7

Victoria.nadalin@cancercare.on.ca

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Intentional tanning among Adolescents in seven Canadian provinces: provincial comparisons (CRAYS 2015)

Abstract

This report explores intentional tanning behaviors among Canadian high school students in light of provincial restrictions on UV tanning device use among youth. Data are from the Cancer Risk Assessment in Youth Survey (CRAYS), collected from January to December 2015, at randomly selected high schools in 7 provinces. Relevant variables were: tanning methods ever used, demographics, and location and refusal of UV tanning device (beds, lamps) use in the past 12 months. Data were weighted so total survey weights by male/female, grade and province equal actual enrolments in these groups. Analyses were conducted in SAS, mostly for grades 10 and 11. Rao-Scott chi squared tests and p-values were calculated. Among 6,803 grade 10 and 11 participants, 82% tanned intentionally, mostly by being/playing outside, or laying in the sun. Spray/self-tanners were used by 15% of participants. UV tanning device use was uncommon (4.4%), lowest in Ontario (2.7%) and British Columbia (3.8%), which have legislation against use among youth. Of 202 who used UV tanning devices in the past 12 months, most did at salons/studios (85%), 35% at home and 30% at a gym. Two hundred and forty-nine participants (3.4%) were refused use of UV tanning devices in the past 12 months. While legislation appears to deter UV tanning device use, it appears to have no impact on UV exposure among high school students overall. Greater prevention efforts are required to deter intentional tanning among high school students.

Keywords: Adolescent; Ultraviolet Rays; Prevention and Control; Legislation; Suntan

Intentional tanning among Adolescents in seven Canadian provinces: provincial comparisons (CRAYS 2015)

Introduction

In recent years, the incidence of melanoma and non-melanoma skin cancers (NMSC) have been increasing in Canada. Between 1986 and 2010, melanoma incidence rates increased by 2% a year in males, and by 1.5% a year in females.[1] In Canada, melanoma is one of the most commonly diagnosed cancers among youth and young adults (8%), and NMSC accounts for at least 40% of new cancers diagnosed.[1,2] The main risk factor for skin cancer is exposure to ultraviolet (UV) radiation,[1] sources of which include sunlight and exposure to UV tanning devices (tanning beds or lamps).

Because North American adolescents engage in all tanning behaviours and are frequent users of UV tanning devices,[3-6] a recent trend in skin cancer prevention, both internationally and in Canadian provinces, has been to limit access to UV tanning devices among youth, either through parental consent requirements or age restrictions.[9,10] While laws restricting youth access to UV tanning devices might be effective, they require enforcement[10,11]and it is unclear if laws result in less UV radiation exposure overall, or merely lead to different patterns of exposure. At the time the data for this study were collected, some Canadian provinces limited UV tanning device use among those under age 18, some under age 19; Alberta did not have legislation; Saskatchewan was transitioning from parental consent requirements to an age-based ban; and the fines for violating these laws varied across provinces.[5, 6, 13-15]

At this time, the pattern of intentional tanning among Canadian youth is not known. In order to assess the impact of laws restricting the use of UV tanning devices, and plan preventive interventions around UV radiation exposure among youth, it is important to understand the current sources of exposure.

The objective of this report is to explore the pattern of intentional tanning among Canadian adolescents in seven provinces, including UV tanning device use, location and service refusal, and its association with other demographic characteristics, in light of the legislation in place at

the time of data collection. Data used in this paper were collected in 2015 for the Cancer Risk Assessment in Youth (CRAYS) survey.

Methods

CRAYS 2015 was a paper-based school survey of Canadian high school students in seven provinces (British Columbia, Alberta, Saskatchewan, Quebec, Ontario, Nova Scotia, and Newfoundland and Labrador) that collected data on a range of health risk behaviours, to determine the impact of provincial policies on relevant behaviours. These same data were collected in 2017 and will be compared with the 2015 results. There are variations in high school grades across the country, therefore, grades for which data were collected varied. For British Columbia, Ontario and Saskatchewan, data were collected for grades 9 through 12; for Alberta, Newfoundland and Labrador, and Nova Scotia, data were collected for grades 10 through 12, and for Quebec, data were collected for grades 9 through 11. The age at which students are usually in a particular grade is the same across provinces. Due to the fact that only grades 10 and 11 are common to all seven provinces, most of our results are reported for these grades only.

The CRAYS questionnaire was developed through a series of meetings with subject matter experts in each area of interest and translated into French. Regarding UV exposure, the investigators were restricted to 5 main questions, and those selected were similar to what was asked in a recent study on adolescent tanning behavior in Ontario, so that results would be comparable.[5] Once developed, the survey was pilot tested (in 2014) to assess student understanding of the questions, response to its logic and flow, and to determine the time required for completion. Nineteen youth participated in a pilot test and focus group, after which the questionnaire was modified significantly. Ethics approval was obtained from the Office of Research Ethics from the University of Waterloo.

School selection was by simple random sample drawn from the *Propel School Database* of schools in each province. The target population was private, public, and Catholic secondary school students. Schools and school boards were recruited through multiple methods, including email and follow-up calls. Schools without school boards were approached directly. In 2015, 74

schools within 46 school boards participated. Students were invited to participate and could opt out at any time; parental consent was active (written) or passive (assumed unless withdrawn) and determined by the school board. Teachers administered the questionnaire during class and completed questionnaires were placed in sealed envelopes, collected by a fellow student and sent back to Propel, where they were machine-scanned using Optical Mark Recognition technology.

Data were collected between January and December 2015 from 12,110 participants, which is 41% of the eligible student population.The questionnaire took approximately 35 minutes to complete and asked a range of demographic and risk factor questions. Intentional tanning questions asked whether students ever used or engaged in the following behaviors to get or keep a tan: being in the sun; spray tanning booth; self-tanning lotions or sprays; tanning bed/lamp; being outside/playing outside; other. Another question assessed the location of UV tanning device use, with response options: home/someone else's home; tanning salon/studio; beauty or hair salon/spa; gym/fitness club; other. Refusal of UV tanning device use was also assessed. Urban/rural status was determined by the postal code of the school, using census definitions.

Statistical analyses

Data were weighted to present provincially generalizable estimates by male/female, grade and province of residence. Analyses were conducted in SAS 9.4 to obtain prevalence estimates for tanning behaviors. Rao-Scott chi-squared test p-values (a design adjusted Pearson chi squared test) were used to assess statistically significant differences based on male/female, grade, ethnicity and place of residence (province and urban/rural). Data were analyzed by grade as opposed to age, because the focus of this study is the overall pattern of intentional tanning of high school students as a peer group. Because those who are not in school were excluded, age would not have been suitable for analysis.

Results

The unweighted demographic characteristics of the sample of participants in seven provinces are shown in table 1. About half (n=6076, 50.2%) were female, half (n=6034, 49.8%) were male,

and participants predominantly attended urban schools (69.7%) and identified themselves as White (78.6%).

Table 2 shows weighted results for tanning methods ever used across seven provinces by demographic characteristics for grades 10 and 11. Ever having tanned intentionally was common in these grades; 81.8% had ever tried to get or keep a tan using any method. There was statistically significant variation by province, from 89.8% in Quebec to 74.4% in British Columbia. Relative to students who did not identify as White, students who identified as White more frequently reported tanning intentionally (86.0% vs 66.8%, p<.0001). More females reported intentional tanning than males (88.5% vs.75.3%, p<.0001).

The most common method ever used to tan across seven provinces was outdoor tanning, reported by 88.5% of females and 75.1% of males (p<.0001). Spray tanning booths and self-tanners were used by 15.0%, however, this was much more common among females than males (25.3% vs 4.7%, p<.0001), and was most common in the Atlantic region (Nova Scotia, Newfoundland and Labrador) where 24.1% of participants reported use.

Having ever used UV tanning devices was reported by 4.4% (95% CI: 2.8, 5.9) of adolescents in seven provinces for grades 10 and 11. A significantly higher proportion of grade 11 students reported using UV tanning devices compared to grade 10 students (2.8% in grade 10, 5.9% in grade 11; p=0.0224). There were no significant differences for UV tanning device use by race/ethnicity or by rural/urban locale.

Across provinces, ever use of UV tanning devices varied, from a high of 6.7% in Saskatchewan to 3.8% in British Columbia and 2.7% in Ontario. As table 3 shows, the only provinces without legislation in place at the time of data collection were Alberta and Saskatchewan, which table 2 shows had prevalence of use of 6.4% and 6.7%, respectively for grades 10 and 11. Regarding provinces for which there were data for grades 10, 11 and 12 (excludes Quebec, where there is no grade 12), prevalence of ever UV tanning device use was 5.4% (95% CI: 3.4, 7.7), highest in Saskatchewan at 11.2% (95% CI: 8.2, 14.3, p= 0.0043) and Alberta 9.7 (95% CI: 6.2, 13.3, p= 0.0245) which did not have legislation, and lowest for British Columbia at 3.8% (95% CI: 3.1, 4.6) and Ontario at 4.3% (95% CI: 0.9, 7.7) (data not shown). For the 6 provinces with data for

grades 10, 11 and 12, prevalence of ever use of UV tanning devices increased with grade from 3.0% (95% CI: 1.6, 4.3) in grade 10, to 8.0% (95% CI: 3.3, 12.6) in grade 12 (data not shown).

Regarding place of UV tanning device use in the past 12 months (table 3), across seven provinces, 85.1% of 202 students in grades 10 and 11 had done so at a tanning/beauty salon, 29.9% at a gym, and 35.1% at home or the home of someone else. Within individual provinces (data not shown), for Ontario, 86.7% of adolescents in grades 9-12 reporting UV tanning device use did so at a tanning/beauty salon (92.2% in grade 10) and 27.2% in a gym or fitness studio. Similar patterns of location existed in other provinces, including those that, like Ontario, have UV tanning device bans on adolescent use. In Ontario, 95.3% of adolescents in grades 10-12 who used UV tanning devices did so at a location outside home or someone else's home (salon, studio or gym), and in British Columbia, 76.4% of adolescents who used UV tanning devices in the past 12 months did so at a location outside home or someone else's home (data not shown).

When all participants were asked if they tried to use UV tanning devices in the past twelve months but were refused (table 4), 3.4% of participants in grade 10 and 11 reported this. Of these 249 individuals, 14.5% (41 individuals) had used tanning equipment at some point in those months (95% CI: 5.8, 23.3). The Atlantic region had the greatest percent of refusals, at 6.5% (p=0.0144). While provincial comparisons were not possible due to small numbers, the main reasons for refusal among these 249 participants were: 'I was too young' (n=185), 'I did not have a permission slip from my parent or guardian' (n=120), and 'I had no proof of age ID' (n=109). Of interest, 77 respondents reported that they were refused use because 'I would not wear eye protection'.

Discussion

Skin cancer risk increases with UV radiation exposure, particularly for those who experience intense sun exposure and sunburns in childhood and adolescence.[1] It is therefore important to design effective prevention efforts against UV radiation exposure, and to have accurate information against which to measure success. The purpose of this study was to explore the pattern of intentional tanning among adolescents in seven provinces, including UV tanning

device use, location and service refusal, with a look at existing legislation so that the impact of policy change on behavior can be assessed over time.

Since the International Agency for Research on Cancer (IARC) determined that UV tanning device use is carcinogenic to humans, many jurisdictions around the world, including several Canadian provinces, have banned their use among adolescents.[12] While most provinces restrict adolescent access to indoor tanning devices, the strength of regulations vary,[9,13-15] and do not address the underlying reasons for intentional tanning.

Our results support evidence that laws prohibiting adolescent use of UV tanning devices may be effective in reducing their use,[16] but not UV radiation exposure overall. Findings in this report may reflect differences in UV tanning device legislation, or a social acceptability bias. A recent study in Ontario, Canada that assessed tanning behaviors among adolescents in an online survey found that 11% participants in grades 10-12 reported having 'ever' used UV tanning devices; the prevalence for Ontario here was lower, at 4% (95% CI: 0.9, 7.7) for grades 10-12.[5] A major difference between the previous report and what was found here is legislation; the Ontario study collected data just prior to a ban on the use of UV tanning devices among adolescents, while the data here were collected over six months following the Act in Ontario. Data from the 2014 Canadian Community Health Survey places UV tanning device use in the past year at 1.7% for those age 12-17, however they suggest that their data be treated with caution due to a large coefficient of variation, and the data we present here is mainly for grades 10 and 11.[3]

In Saskatchewan in 2012/13, adolescents were able to use UV tanning devices with parental consent. At this time, 4% of male and 9% of female students in grades 7-12 reported ever use of UV tanning devices.[6] Our study found that among those in grades 10-12, 11.2% (95% CI: 8.2, 14.3, p= 0.0043) of Saskatchewan students had ever used tanning devices. The legislation for Saskatchewan changed at the end of 2015 (after CRAYS data were collected), so this finding may change in the future.[6] Conversely, in Alberta, which had no legislation against the use of UV tanning devices among adolescents at the time these data were collected, prevalence of use was 9.7 (95% CI, 6.2, 13.3) for grades 10-12.

The literature around UV tanning device legislation has shown that enforcement is important, that laws requiring parental consent are typically not well enforced, and that banning use among adolescents is more effective than parental consent.[10] In this paper, provincial policies banning minors' use of UV tanning devices is associated with lower prevalence of youth using UV tanning devices. It is of interest, however, that although there were age based bans in the provinces of Ontario, the Atlantic provinces, Quebec and British Columbia at the time these data were collected, when asked about where they were obtaining their tan, although numbers are small, most did so at commercial establishments, which may indicate a lack of enforcement.[9,13-18]

It has been theorized that the introduction of legislation against UV tanning devices among adolescents might result in greater home use.[5] In this study, numbers are too small to assess this theory, and a previous study of Ontario adolescents in grades 7-12 reported that 25% of the 104 participants who had used the equipment in the previous 12 months had done so at home.[5] It is possible that the introduction of legislation has led adolescents to spend more time in natural sunlight, as 80% of Ontario participants have reported doing so, and 75% of students in grades 10-12 has reported tanning outside in a study conducted prior to the introduction of legislation.[5]

Spray and self-tanning products do not expose the skin to UV radiation. Therefore, encouraging these alternative means of 'tanning' have been suggested as a means of cancer prevention.[19] One study of adolescent females in the United States found that half had used sunless tanning products prior to initiating UV tanning device use, and 37% reported initiating the behavior at the same time.[20] This same study found that the use of sunless tanning products was greater among younger adolescents, and UV tanning device use was higher in older adolescents. While we did not ask when participants 'ever' used various methods, among females in grades 10 and 11, 25% reported ever having used sunless tanning products, and 4.9% reported ever using UV tanning devices. The use of both increased statistically with grade. Across provinces, while there were some significant differences in sunless tanning across the country, it does not appear to be related to the existence of legislation, with highest prevalence of use in grades 10 and 11 in Nova Scotia and Newfoundland, and lowest in Ontario and Quebec. The use of sunless

tanning products, while without apparent risk per se, does indicate a positive attitude towards tanned skin that may lead to use of UV tanning devices in the future, or, in light of growing legislation against UV tanning devices, may result in greater use in coming years.

This study collects cross-sectional, self-reported data, which is a limitation due to the possibility of social desirability bias. It is, however, a strength that the data captured here is from a large sample and that it is school-based and has been repeated for 2017; in coming months the data sets will be compared in light of legislation enacted. Another limitation of this study is the different grades across the country, which limits provincial comparisons to grades 10 and 11. This limitation was mitigated by presenting some results for grades 10, 11 and 12 with the exclusion of Quebec, and by presenting some results for individual provinces. While not all provinces participated in the CRAYS survey, it is a strength to have collected multi-province data on intentional tanning behaviors from large samples of high school students, and that the questions used were adapted from earlier studies of tanning behaviour in Ontario.[5]

While this study was unable to directly measure the effect of the enactment of legislation against the use of UV tanning devices, a second wave of CRAYS collected data in 2017. Comparisons can then be made between years and this natural experiment will provide a better picture of intentional tanning among youth in Canada.

Conclusion

This study demonstrates that deliberate tanning outdoors is very common across all Canadian provinces and somewhat higher than what has been reported previously in Ontario.[5] Our survey found that the prevalence of spray tanning and self-tanning are consistent with previous Ontario data, and that the prevalence of use of UV tanning devices is relatively low, varies across provinces, and may be related to the strength of provincial legislation.[5] Data collected in 2017 will provide researchers with some understanding of the potential unintended consequences associated with legislation that prohibits adolescents' use of tanning devices, such as increased intentional outdoor tanning.

Conflict of interest

The authors declare no conflict of interest.

Table 1: Demographic Characteristics of participants, seven Canadian provinces (2015)

Characteristic	Total sample, % (n)	Grades 10 and 11, % (n)
Female/Male		
Female	50.2 (6076)	51.6 (3508)
Male	49.8 (6034)	48.4 (3295)
Grade		
9	23.8 (2883)	-
10	28.9 (3499)	51.4 (3499)
11	27.3 (3304)	48.6 (3304)
12	20.0 (2424)	-
Residence		
Urban	69.7 (8446)	68.8 (4683)
Rural	28.4 (3434)	29.5 (2006)
Ethnicity describe themselves as[ŧ]		
White	78.6 (9513)	79.0 (5373)
Black	3.7 (449)	3.6 (245)
West Asian/Arab	1.4 (173)	1.3 (90)
South Asian	2.2 (271)	1.9 (130)
East/Southeast Asian	9.1 (1106)	9.6 (650)
Latin American/Hispanic	1.9 (229)	1.8 (121)
Aboriginal	7.1 (855)	7.3 (496)
Other	4.4 (533)	4.0 (273)
Age		
11	0.0 (10)	0.1 (4)
12	0.0 (3)	0.0 (1)
13	0.8 (104)	0.1 (40)
14	14.4 (1978)	1.2 (80)
15	25.1 (3131)	34.5 (2348)
16	26.7 (3371)	47.2 (3209)
17	23.9 (2634)	15.7 (1070)

18	7.5 (757)	1.0 (67)
19	1.6 (122)	0.3 (20)
Total	12110	6803

[i]Multi-response option: students were instructed to mark all that apply. Sum of categories is greater than total sample size.

Table 2: Tanning methods ever used[£] in seven Canadian provinces (2015)

Grades 10 and 11[*]								
	Any method		**Any outdoor tanning**		**Spray tanning, self-tanning**		**UV tanning device**	
	% (95% CI) (n= 5309)	**Rao-Scott**	**% (95% CI) (n=5267)**	**Rao-Scott p-value**	**% (95% CI) (n=1107)**	**Rao-Scott**	**% (95% CI) (n=280)**	**Rao-Scott p-value**
Seven provinces	81.8 (79.0, 84.6)		81.7 (79.0, 84.5)		15.0 (13.2, 16.7)		4.4 (2.8, 5.9)	
Female/Male								
Female	88.5 (85.6, 91.3)	<.0001	88.5 (85.7, 91.4)	<.0001	25.3 (21.0, 29.6)	<.0001	4.9 (3.0, 6.8)	0.3682
Male	75.3 (71.6, 79.0)		75.1 (71.5, 78.8)		4.7 (3.4, 6.0)		3.8 (1.8, 5.8)	
Grade								
10	81.7 (78.3, 85.1)	0.8842	81.7 (78.3, 85.0)	0.9338	12.9 (10.7, 15.1)	0.0247	2.8 (1.7, 3.9)	0.0224
11	81.9 (78.8, 85.0)		81.8 (78.7, 84.9)		17.0 (14.1, 19.8)		5.9 (2.9, 8.9)	
Ethnicity								
White	86.0 (84.1, 87.9)	<.0001	85.9 (84.0, 87.8)	<.0001	15.9 (14.5, 17.2)	0.0277	4.5 (2.7, 6.2)	0.7333
Non-white[ł]	66.8 (60.6, 72.9)		66.6 (60.8, 72.4)		11.6 (7.6, 15.6)		3.9 (1.2, 6.7)	
Living area								
Urban	81.4 (77.6, 85.1)	0.3044	81.4 (77.7, 85.1)	0.3390	14.5 (12.3, 16.8)	0.1893	4.3 (2.3, 6.3)	0.6706
Rural	83.9 (81.1, 86.7)		83.7 (81.1, 86.3)		16.5 (14.4, 18.5)		4.7 (3.5, 5.9)	
Province								
Ontario	81.1 (76.8, 85.4)		81.3 (77.3, 85.4)		13.2 (10.5, 16.0)		2.7 (1.0, 4.5)	
Atlantic Region	84.0 (81.3, 86.7)	0.2247	84.3 (81.7, 87.0)	0.1878	24.1 (19.6, 28.7)	<.0001	6.2 (3.3, 9.1)	0.0161
Quebec	89.8 (86.8, 92.8)	<.0001	89.6 (86.5, 92.7)	<.0001	13.7 (10.8, 16.6)	0.8205	6.5 (1.6, 11.3)	0.0393
Saskatchewan[‡]	81.8 (75.3, 88.3)	0.8611	81.8 (75.5, 88.1)	0.9114	17.2 (15.1, 19.3)	0.0057	6.7 (4.8, 8.6)	0.0009
Alberta[‡]	77.4 (72.5, 82.2)	0.2370	76.8 (71.9, 81.6)	0.1207	17.4 (14.5, 20.3)	0.0114	6.4 (4.8, 8.0)	0.0005
B. C.	74.4 (67.0, 81.8)	0.0887	73.8 (66.0, 81.6)	0.0530	17.5 (13.7, 21.2)	0.0258	3.8 (2.6, 5.0)	0.3282

[£]Multiple response options possible

[*]Weighted prevalence, n=6803.

[ł]Participants were categorized as Non-white if they identified as Black, West Asian/Arab, South Asian, East/Southeast Asian, Latin American/Hispanic, Aboriginal or other—alone or in combination with any other ethnicity.

[‡]Provinces that did not have legislation banning adolescent tanning at the time of data collection.

Table 3: UV tanning device place of use in seven Canadian provinces the last 12 months (2015), and type of provincial legislation*

	Grades 10, 11 (n=202)			Legislation during data collection
Seven provinces	**Home % (n)**	**Salon % (n)**	**Gym % (n)**	
Female/Male	35.1 (70)	85.1 (144)	29.9 (54)	
Female	28.7 (38)	82.2 (103)	19.6 (29)	
Male	42.4 (32)	88.5 (41)	42.1 (25)	
Grade				
10	62.0 (33)	76.4 (52)	50.1 (21)	
11	23.7 (37)	88.7 (92)	20.9 (33)	
Ethnicity				
White	26.5 (48)	85.6 (118)	19.9 (39)	
Non-White	70.4 (22)	82.8 (26)	70.9 (14)‡	
Living area				
Urban	37.1 (43)	91.0 (96)	32.8 (36)	
Rural	30.7 (27) ‡	72.0 (48)	23.6 (18)	
Province	**Home**	**Outside home**		
Atlantic (NS and NL)	--	80.4 (21) ‡		Ban[1] under 19
Quebec	--	89.7 (25) ‡		Ban[2] under 18
Ontario	--	95.4 (19) ‡		Ban[3] under 18
Saskatchewan	--	82.3 (20) ‡		No ban during data collection
Alberta	28.1 (12) ‡	81.4 (38)		No ban during data collection
British Columbia	72.1 (24) ‡	88.6 (33)		Ban[4] under 18

*N <10 and/or coefficient of variation greater than 33.3 have been suppressed.

‡N< 30; due to low sample size and/or large coefficients of variation, the quality of these estimates is low and should be interpreted with caution.

1. Government of Nova Scotia (2010), Government of Newfoundland and Labrador (2013); 2. Government of Québec (2013); 3. Government of Ontario (2013); 4. Government of British Columbia (2011).

Table 4: Students who tried to use UV tanning devices in seven Canadian provinces (2015) the previous 12 months, but were refused, any reason.

	Grades 10, 11 Estimate % (n=6803)	Lower 95% CI	Upper 95% CI	Rao-Scott p-value
Seven provinces	3.4 (249)	2.5	4.4	
Female/Male				
Female	4.2 (158)	2.6	5.9	0.0486
Male	2.7 (91)	1.8	3.5	
Grade				
10	3.1 (125)	1.9	4.3	0.3934
11	3.8 (124)	2.5	5.0	
Ethnicity				
White	3.1 (170)	2.3	4.0	0.0709
Non-White	4.6 (79)	2.5	6.6	
Living area				
Urban	3.2 (158)	2.1	4.4	0.5976
Rural	3.7 (80)	2.6	4.8	
Used UV tanning devices[ɨ]				
No	2.8 (178)	1.8	3.7	<.0001
Yes	14.5 (41)	5.8	23.3	
Province				
Ontario	3.1 (56)	3.1	3.1	ref
Atlantic Region	6.5 (38)	3.3	9.6	0.0144
Quebec	2.7 (20)[‡]	2.7	2.7	0.7373
Saskatchewan[€]	4.9 (32)	4.9	4.9	0.0668
Alberta[€]	3.4 (29)[ǁ]	3.4	3.4	0.7338
British Columbia	4.5 (74)	4.5	4.5	0.1766

[ɨ]Percentage of respondents who were refused the use of tanning equipment among those who also reported having successfully used tanning equipment at least once in the past year, and among those who did not report successfully using tanning equipment at least once in the past year.
[‡]N<30, Coefficient of variation high sampling variability (16.66 < CV < 33.3); due to low sample size and/or large coefficients of variation, the quality of these estimates is low and should be interpreted with caution
[€]Provinces that did not have legislation banning adolescent tanning at the time of data collection
[ǁ]N<30

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Data use statement

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Highlights

- Most (82%) Canadian students in grades 10 and 11 tan intentionally, mainly outdoors
- Ever use of tanning beds or lamps is uncommon among grade 10 and 11 students (4%)
- Ever use of spray/self-tanners was reported by 15% of grade 10 and 11 participants