

Short report: Adolescents' health

Does having a family physician make a difference?

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During adolescence, many young people initiate behaviours that can compromise their health and result in lifelong problems.¹ A recent survey in Canada showed that 25% of those aged 15 to 17 years smoked regularly and 31% of those aged 15 to 17 drank alcohol regularly.² Obesity is also a growing problem in Canada; prevalence among children reaches 35%, and 16% of these are classified as obese.³

Guidelines suggest adolescents should receive regular preventive health care.⁴ At visits, family physicians should do physical examinations, screen for behaviours that compromise health and develop relationships with these adolescents. Whether such relationships have any effect on the behaviour of adolescents is unclear. This paper looks at whether having a regular family physician is associated with healthy behaviour among Canadian adolescents.

In 1999, Walker and Townsend⁵ did a systematic review of the role of FPs in adolescent health and concluded that there was no good-quality research on the subject. No known study has attempted to evaluate the effect Canadian FPs have on their adolescent patients.

METHODS

I did a secondary analysis of National Population Health Survey (NPHS) (1998-1999) data that I obtained through a University of Alberta education licence. The University of Alberta's Health Research Ethics Board granted approval for the secondary analysis. The survey targeted Canadian households, excluding people on Indian reserves, Canadian Forces bases, and

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some remote areas of Quebec and Ontario. From each household, one member was randomly selected for an in-depth interview (N = 17 626). For this study, I chose all interviewees aged 12 to 19 (N = 1493).

Because the survey did not specifically ask whether respondents had regular FPs, I needed a protocol to analyze the data. A recent study by McIsaac et al⁶ outlined a method for recoding data from the NPHS to determine whether subjects had regular FP care. This method was used to classify the data into three groups: regular care, some care, and no care. Since only 59 adolescents were classified in the "some care" category and excluding them did not modify the results, this category was omitted in the published results.

Regular care was defined as acknowledging having a regular physician (family physician or specialist) and seeing a family physician more than 50% of the time. No care was defined as not acknowledging having a regular physician even if subjects had seen family physicians or specialists in the last year.

Variables that reflected demographics or health behaviour were selected for analysis. Due to the categorical nature of the data, a χ^2 test was used to determine whether differences exist between groups. Logistic regression was used to calculate odds ratios for dependent variables, controlling for sex, age, and household income.

RESULTS

The overall response rate to the NPHS was 88%. Regular FP care was associated with younger age and higher socioeconomic status, but not with sex (**Table 1**). **Table 2** presents results from the data on health behaviour. Regular care was associated with lower rates of smoking and drinking alcohol, higher use of bicycle helmets, and fewer unmet health care needs. These associations were maintained even when potential confounding variables were considered.

Table 1. Demographic data

DEPENDENT VARIABLE	NO. OF RESPONDENTS (N = 1434)	NO FAMILY PHYSICIAN (N = 207) %	REGULAR FAMILY PHYSICIAN (N = 1227) %	P VALUE
Sex				.653
• Male	742	14.0	86.0	
• Female	692	14.9	85.1	
Age				<.001
• 12-14	547	10.1	89.9	
• 15-19	887	17.1	82.9	
Household income				.001
• <\$20 000	203	23.1	76.8	
• \$20 000-\$49 999	437	12.4	87.6	
• \$50 000-\$80 000	368	13.6	86.4	
• >\$80 000	240	10.4	89.6	

Table 2. Odds ratios with 95% confidence intervals for associations between health behaviour and family physician care

BEHAVIOUR	NO. OF RESPONDENTS	NO FAMILY PHYSICIAN %	REGULAR FAMILY PHYSICIAN %	ODDS RATIO* (95% CONFIDENCE INTERVAL)
PHYSICAL ACTIVITY				
Active	541	12.4	87.6	1.28 (0.87-1.90)
Moderate	302	15.2	84.8	0.87 (0.57-1.34)
Inactive	487	17.0	83.0	1.00
BICYCLE HELMET USE				
Mostly or always	260	8.5	91.5	1.99 (1.09-3.63)
Rarely or never	431	15.5	84.5	1.00
SMOKING				
Daily	208	24.5	75.5	.51 (0.33-0.80)
Occasional	68	8.8	91.2	2.34 (0.82-6.69)
Former	307	15.0	85.0	0.84 (0.56-1.23)
Never	848	12.1	87.9	1.00
DRINKING ALCOHOL				
Daily	443	20.3	79.7	0.45 (0.28-0.73)
Occasional	343	14.0	86.0	0.72 (0.44-1.19)
Former	149	13.4	86.6	0.63 (0.35-1.15)
Never	496	9.9	90.1	1.00
LAST TIME BLOOD PRESSURE TAKEN				
<1 year	596	12.6	87.4	1.85 (1.15-2.97)
1-2 years	189	14.3	85.7	1.55 (0.86-2.80)
>2 years	175	21.7	78.3	1.00
PAP TEST EVER				
Yes	88	15.9	84.1	1.49 (0.60-3.67)
No	94	17.0	83.0	1.00
HEALTH CARE NEEDED BUT NOT RECEIVED				
Yes	60	28.3	71.7	0.41 (0.21-0.79)
No	1374	13.8	86.2	1.00


*Odds ratio for regular family physician (using no family physician as reference), controlling for age, sex, and household income.

DISCUSSION

Previous research has shown that women and those of higher socioeconomic status are more likely to have regular FP care.² Consistent with the adult population, adolescents' blood pressure was more likely to be checked within the recommended 1 year if they received regular care.⁶ Results of this study support previous research that has shown that primary care consultations can have a positive influence on the exercise, smoking, and drinking behaviours of adolescents.⁷ Although a causal relationship cannot be proved due to the cross-sectional nature of the data, these associations are still noteworthy.

The lack of significant association between physical activity and regular FP care is interesting, given that obesity rates are increasing among Canadian children.³ Among adults, an association has been shown between Pap tests and FP care.⁶ The absence of a similar association in this study might be due to small number of respondents (N = 182).

It is important to note that the NPHS did not examine some important factors, such as parental influence or accessibility. Also, the study excluded adolescents who were from reserves or were homeless. These could be the adolescents most in need of health care services.

In Canada, smoking, alcohol consumption, and inactivity among adolescents are very worrisome. Despite the acknowledged limitations of this study, it is the first Canadian study to show positive associations between regular FP care and healthy behaviour among adolescents. Further research with a longitudinal study design could evaluate Canadian FPs' effect on their adolescent patients. 

Competing interests

None declared

Editor's key points

- This survey of Canadian adolescents showed that those who had regular family physicians were younger, were socioeconomically better off, and had better lifestyle habits (concerning smoking, drinking, and wearing bicycle helmets) than those who did not.
- Adolescents who had family physicians were more likely to have received the required health care.

Points de repère du rédacteur

- Cette enquête auprès d'adolescents canadiens montre que ceux ayant leur propre médecin de famille sont plus jeunes, ont un statut socio-économique plus élevé et ont de meilleures habitudes de vie (tabagisme, consommation d'alcool, port du casque de vélo).
- De plus, les adolescents ayant un médecin de famille sont plus susceptibles d'avoir reçu les soins de santé requis.

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