The Awareness and Use of Canada's Physical Activity Guide to Healthy Active Living

John C. Spence, PhD[1]
Ronald C. Plotnikoff, PhD[1,2]
W. Kerry Mummery, PhD[3]

ABSTRACT

Background: With the recent release of *Canada's Physical Activity Guide to Healthy Active Living (CPAG),* there is a need to identify the extent to which the population is aware of and using the guide. The purpose of this study was to report on population awareness and use of the CPAG, and secondarily to determine if demographic variables (i.e., age, sex, ethnicity, household income, educational level) moderate the awareness and use of the CPAG.

Methods: In a large recreation survey, questionnaires were mailed to 10,000 randomly selected households in Alberta. A respondent from each household was self-selected based on which member, 18 years or older, would celebrate the next birthday. Two questions pertaining to the awareness and use of the CPAG were included.

Results: Responses were received from 2,719 Albertans. Of those responding, 20.7% (95% CI, 19.2-22.2) stated they were aware of the CPAG and 5.5% (95% CI, 4.7-6.3) had actually followed the recommendations in the guide. Gender and educational level were significant moderators of awareness and use of the CPAG.

Conclusions: The implications of these findings are that the majority of the Canadian population is not aware of the CPAG. Furthermore, certain segments of the population are less aware of the guide than others.

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

1. Faculty of Physical Education and Recreation, University of Alberta, Edmonton, AB
2. Alberta Centre for Active Living and Centre for Health Promotion Studies
3. Faculty of Arts, Health, and Sciences, Central Queensland University, Rockhampton, Australia
Correspondence: Dr. John C. Spence, Faculty of Physical Education and Recreation, E-424 Van Vliet, University of Alberta, Edmonton, AB T6G 2H9, Tel: 780-492-1379, Fax: 780-492-2364, E-mail: jc.spence@ualberta.ca
Acknowledgement: This research was supported in part by a grant from the Alberta Sport, Recreation, Parks and Wildlife Foundation.

The physical, psychological, and economic benefits associated with physical activity are well recognized.[1-3] Sufficient epidemiological data exist to justify the claim that even modest participation in low intensity activities can reduce the risk of all-cause mortality in Canadians.[4] Unfortunately, 62% of Canadians are not active enough to experience health benefits.[5]

In the fall of 1998, Health Canada in association with the Canadian Society for Exercise Physiology released *Canada's Physical Activity Guide to Healthy Active Living* (CPAG). This guide was the first in a series of physical activity guides for Canadians and was developed for adults. A subsequent guide specifically aimed at older adults was released 12 months later. The aim of the CPAG is to inform Canadians about the benefits of physical activity and to encourage participation through appropriate activities. While some information exists on the extent to which these guides have been distributed (i.e., mainly to professional organizations),[6] no information is available on the awareness and use of the CPAG by the Canadian population. If we are to assess the effectiveness of the CPAG, then such information needs to be collected. Thus, two questions relating to awareness and use of the CPAG were included on a large provincial survey of recreation participation in Alberta. A second purpose of the study was to determine if demographic variables (i.e., age, sex, ethnicity, household income, educational level) moderate the awareness and use of the CPAG.

METHOD

Procedure

A random sample of 10,000 Alberta households was selected from a computer-generated list of all households listed in telephone directories in the province. The sampling unit was the individual household. Upon receiving a questionnaire in the mail, a respondent from each household was self-selected based on which member, 18 years or older, would celebrate the next birthday. The sampling technique was designed to provide a representative sample of Alberta households.

Data were collected by mail during May and June 2000. Surveys were mailed to the household sample in early May. Two weeks

after the first wave mail-out, a postcard reminder was sent to those households that had not responded. In early June, a final survey package was mailed out to those households that had not responded.

Participants and response rate

The *response rate* is a percentage representing the number of people participating in the survey divided by the number selected in the sample. Questionnaires were received from 2,719 households or 27.2% of the sample. Participants included 1,355 males and 1,217 females, ranging in age from 18 to 94 years with a mean age of 48.23 years (median 47.0 years).

Sample representativeness

A sample is considered representative of the larger population from which it is selected if the aggregate characteristics of the sample closely approximate those same characteristics in the population. For the purposes of this study, the Index of Dissimilarity[7] for age distributions was utilized to provide a measure of sample representativeness. The index of dissimilarity is based on the absolute differences between the proportions of each age group. The differences are summed, without regard to sign, and divided by two.

The comparison of the 2000 Alberta Recreation Survey sample's age distributions with the 1996 Canadian Census of Population and Housing Statistics[8] resulted in an Index of Dissimilarity for the total sample of 2.74. A difference of 10 or less indicates that there is a similar distribution in the samples with less than 10% variation overall.[7] Thus, the index of dissimilarity for the total sample demonstrates that the sample adequately reflected the population from which they were drawn on this dimension.

Further, the proportions of the total responses received from larger municipalities were: Calgary (31.6%), Edmonton (29.5%), Lethbridge (7.2%), and Red Deer (2.4%). These proportions closely mirror the current population distribution in Alberta.[8]

Instrument

The survey instrument included questions about recreation participation (e.g., types of activities, frequency of participation), attitudes to funding and delivery of recreation services in the province, and demographics. The following two questions pertaining to the CPAG were asked of the respondents: a) "In 1998, Health Canada released Canada's Physical Activity Guide to Healthy Active Living. Are you aware of this guide?" and b) "Have you used the guide?"

TABLE I

Demographic Characteristics of Albertans who are Aware of or Use Canada's Physical Activity Guide to Healthy Active Living (N = 2,719)

		% Aware of Guide (n=544)	% Who Use Guide (n=149)
Overall		20.7	5.5
Gender*	Male	18.0	4.7
	Female	24.0	5.7
Age (years)	18-25	14.6	2.2
	26-35	19.2	5.2
	36-45	21.6	5.6
	46-55	19.4	6.6
	56-65	23.0	6.8
	66-75	18.9	5.0
	76+	24.3	5.6
Ethnicity	Aboriginals/Metis	16.1	0.0
	Chinese	18.6	6.8
	Other Asian	23.8	11.1
	White	20.6	5.6
	Other	29.2	10.4
Household Income	<$10,000	31.7	2.0
	$10,000-$30,000	21.8	5.0
	$30,001-$50,000	20.5	6.0
	$50,001-$70,000	20.6	6.0
	$70,001-$90,000	21.2	9.8
	$90,001 or more	20.0	5.0
Education*†	High school or less	17.7	3.0
	Vocational	19.3	4.5
	College	20.9	6.5
	University	23.9	7.8

* $p < 0.05$ for awareness of guide
† $p < 0.05$ for use of guide

RESULTS

On average, 20.7% (95% CI, 19.2-22.2) of Albertans stated they were aware of the CPAG and 5.5% (95% CI, 4.7-6.3) had actually used or followed the recommendations in the guide (see Table I). A significantly greater proportion of females indicated they were aware of the CPAG than males, χ^2 (1, N = 2,572) = 13.93, $p < 0.0001$ and those with higher educational levels were more likely to be aware of the CPAG χ^2 (4, N = 2,569) = 10.07, $p = 0.039$, and use it χ^2 (4, N = 532) = 12.36, $p = 0.015$ than those with lower levels of education. Neither age, ethnicity, nor household income served as significant moderators either of awareness or use of the CPAG.

DISCUSSION

The strength of this study was that it is the first to report on population awareness and use of the CPAG. The information was gleaned from a large representative sample of Albertans. However, the precision of the information presented here may be subject to some error due to the nature of the survey techniques used. Further, because of the low response rate, it is possible that the sample has a particular bias. For instance, people who are more physically active and participating in recreation pursuits may have been more likely to respond to this survey.

This survey found that approximately 21% of the Alberta population is aware of the CPAG. The fact that females and those with higher levels of education are more aware of the guide suggests that we may need to emphasize targeting CPAG promotions and distribution to males and those with lower levels of education.

It is difficult to judge how effective the CPAG campaign has been because little information exists on population-based physical activity promotions. In a one-year follow-up to the release of the Surgeon General's report on physical activity and health in the United States,[9] approximately 32% of Americans stated they were aware of the report. While it is claimed that "thousands of copies" of the CPAG have been distributed in Alberta,[6] the difference in awareness between the two documents is

most likely due to the degree of publicity and promotional campaign surrounding the Surgeon General's report. Future surveys of physical activity should include standard questions about the awareness and use of the CPAG in order to guide research, practice, and policy in the promotion of physical activity in our population.

REFERENCES

1. Bouchard C, Shephard RJ, Stephens T (Eds.). *Physical Activity, Fitness, and Health: International Proceedings and Consensus Statement*. Champaign, IL: Human Kinetics Publishers, 1994.
2. Katzmarzyk PT, Gledhill N, Shephard RJ. The economic burden of physical inactivity in Canada. *CMAJ* 2000;163:1435-40.
3. U.S. Department of Human Services. Physical activity and health: A report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 1996.
4. Villeneuve PJ, Morrison HI, Craig CL, Schaubel DE. Physical activity, physical fitness, and risk of dying. *Epidemiol* 1998;9:626-31.
5. Craig CL, Russell SJ, Cameron C, Beaulieu A. Foundations for Joint Action: Reducing Physical Inactivity. Ottawa, ON: Canadian Fitness and Lifestyle Research Institute, 1999.
6. Health Canada. Canada's Physical Activity Guide to Healthy Active Living. *Launch News* 2000; 4. Available on line at: http://www.paguide.com.
7. Duncan OD, Duncan B. Residential distribution and occupational stratification. *Am J Sociol* 1955;60:493.
8. Statistics Canada. *The Census of Population and Housing*. Ottawa, ON: Statistics Canada, 1996.
9. Morrow JR, Jackson AW, Bazzarre TL, Milne D, Blair SN. A one-year follow-up to Physical Activity and Health: A Report of the Surgeon General. *Am J Prev Med* 1999;17:24-30.

Received: June 25, 2001
Accepted: April 11, 2002

RÉSUMÉ

Contexte : La publication récente du Guide canadien d'activité physique pour une vie active saine nous a incité à déterminer dans quelle mesure la population connaît et utilise ce guide. Notre étude rend compte de ces deux aspects, puis tente de découvrir si certaines variables démographiques (âge, sexe, appartenance ethnique, revenu du ménage, niveau de scolarité) influent sur la connaissance et l'utilisation du Guide.

Méthode : Dans le cadre d'une vaste enquête sur les loisirs, des questionnaires ont été postés à 10 000 ménages albertains sélectionnés au hasard. Chaque ménage a choisi par lui-même un répondant : le membre du ménage de 18 ans et plus dont l'anniversaire de naissance était le plus proche. Le questionnaire comportait deux questions sur la connaissance et l'utilisation du Guide.

Résultats : Nous avons reçu les réponses de 2 719 Albertains. De ce chiffre, 20,7 % (IC de 95 % = 19,2–22,2) ont dit connaître l'existence du Guide, et 5,5 % (IC de 95 % = 4,7–6,3) en avaient suivi les recommandations. Le sexe et le niveau de scolarité étaient des variables modératrices significatives de la connaissance et de l'utilisation du Guide.

Conclusion : Ces résultats portent à croire que la majorité de la population canadienne ignore l'existence du Guide, et que certains segments de la population en ont encore moins connaissance.