Trends in the dietary patterns and prevalence of obesity among Greenlandic school children

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ABSTRACT

Objective. The aim of the study was to examine the trends in the dietary patterns of selected food items and in the prevalence of self-perceived obesity in a population of Greenlandic schoolchildren. Study Design. The study is based on three school surveys among Greenlandic schoolchildren, class 6 to 11 in public schools, and contributing to the Health Behaviour in School-aged Children (HBSC) Study. Data are collected through self-completed questionnaires administered in the classroom. Three surveys have been carried out in Greenland in 1994, 1998 and 2002 with the participation of 2,999, 3,057 and 2,010 pupils, respectively. Results. The intake of vegetables has increased significantly since 1994, and the intake of fruits, sweets and soft drink has decreased significantly at a 5% level. An unchanged high proportion of schoolchildren report to be on a diet or consider themselves obese. Conclusion. Most of the observed trends are positive, with regard to intake of vegetables and sweets and consumption of soft drinks. The fact that a high proportion of schoolchildren consider themselves to be obese must be assumed to have a negative impact on the psychological well-being of this population. The results of the survey can reveal changes which have occurred over time for the specified population. This knowledge can be used in public health work and planning.

Keywords: Adolescent health, dietary patterns, self-perceived obesity, school surveys.

INTRODUCTION

Obesity is an increasing focus of interest within the field of public health. It is a complex, multifactorial disease that develops from the interaction of genetic, metabolic, social, behavioural and cultural factors (1). The global epidemic of obesity is thought to be an unintended consequence of modernisation, economic development, urbanisation and other societal changes (2).

Obesity as an escalating epidemic affects all demographic groups, including children and adolescents (3). Because of their public health importance, the trends in child obesity should be closely monitored (4). This might be especially important in the Greenlandic population, where 30% are under 20 years of age.

Furthermore, there are reasons to be on the alert with respect to obesity in children and adolescents, since childhood obesity tends to predict adult obesity, and overweight children are more likely to become obese adults (5). Obese children and adolescents may encounter prejudice and discrimination which often begins at an early age (3).

Diet and obesity are two closely linked areas of much attention within public health research. This study was aimed at examining these areas with the results of the HBSC surveys performed in Greenland since 1994. The developments over time, or trends, in the dietary patterns of vegetables, fruits, sweets and soft drink as well as the level of obesity were examined by means of self-perceived obesity and the proportion of those who report being on a diet.
MATERIAL AND METHODS

The study is based on three school surveys among Greenlandic schoolchildren, from classes 6 to 11 in public schools. The study contributes to the Health Behaviour in School-aged Children (HBSC) study, which is a cross-national research study conducted in collaboration with the WHO Regional Office for Europe (6).

Data are collected through self-completed questionnaires administered in the classroom, which contain a wide range of questions, e.g. on social background, family relations, school environment, health behaviour and health outcomes. Three surveys have been carried out in Greenland in 1994, 1998 and 2002, with the participation of 2,999, 3,057 and 2,010 pupils of approximately 11 to 17 years of age.

Dietary patterns were examined by the question How often do you eat/drink…? the various food items, with 5 categories to answer (More than once a day, Once a day, Once a week, Rarely and Never). The trends in the dietary patterns were examined by looking at the changes in the proportion of those who reported that they ate/drank the selected food items at least every day.

Obesity was examined by two questions in all three surveys. Are you on a diet to lose weight? that had three possible answers; No, because my weight is fine, No, but I do need to lose weight and Yes.

The other question concerning the self-perception of obesity was the question or statement Do you think your body is…? to which there were 6 categories to answer (Much too thin, A bit too thin, About the right size, A bit too fat, Much too fat and I don’t think about it). To examine the trends within these variables, the proportion of those who thought of themselves as A bit too fat and Much too fat was included.

RESULTS

The trends in the dietary patterns are illustrated by figures 1 to 4. There has been an increase in the proportion of schoolchildren who report eating vegetables at least every day. The increase is significant at a 5% level (Figure 1 a). There has been a decrease in the daily intake of fruit, and the younger schoolchildren seem to eat the most fruit. The decrease is significant at a 5% level. 19-30% report eating fruit every day (Figure 1 b).

There has been a decrease in the daily intake of sweets, which is significant for the youngest and the oldest of the age groups (Figure 2 a). There has been a decrease in the daily consumption of soft drink which is highly significant for all age groups (Figure 2 b).

An unchanged high proportion of schoolchildren consider themselves fat or want to lose weight. In percentages, 20% of the total male adolescent population and 25% of the 12-year-old girls and 45% of the 16-year-old female adolescents consider themselves obese (Figure 3 a). No changes are seen in the trends concerning dieting. 30-48% of the females report being on a diet or wanting to lose weight (Figure 3 b).

DISCUSSION

The findings indicate a positive development in the dietary patterns of the adolescent population. In spite of this positive development, only 26-41% report that they eat vegetables on a daily basis and only 19-30% report that they eat fruit every day. Despite a decrease in the consumption of soft drinks, which can only be considered positive, as many as half of the older group report drinking them daily.

This requires a continuing effort aimed at monitoring the dietary patterns of this population in order to follow up on the dietary patterns and the health of this population. This is important, since the adolescent population rarely appears in other registers, and it plays a major role in public health work and planning.

Assuming that being overweight, or even considering oneself overweight, has a negative effect on psychological well-being, the fact that a large proportion are on a diet or consider themselves overweight may be assumed to have detrimental effects on the total well-being of this population.
Further studies should examine the proportion of obesity within this population, and scrutinise the level of concordance between the more objective criteria set by clinical experts and the statements of the adolescents themselves.

There is no reason to believe that the obesity epidemic, which is well known in large parts of the world, will not continue to spread into Greenland. With this knowledge, and with knowledge of the prevalence and occurrence of the phenomenon, public health workers should attempt to prevent this from spreading wider than is avoidable by monitoring high-risk individuals and instructing them on means to weight reduction.

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