

THE NSW SCHOOLS FITNESS AND PHYSICAL ACTIVITY SURVEY, 1997

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This article describes the background to, and methods used in, the NSW Schools Fitness and Physical Activity Survey, 1997. The survey, instigated by the NSW Department of School Education, is an example of comprehensive intersectoral research and training, and it illustrates some lessons in developing productive collaborations.

An innovative Personal Development/Health/Physical Education (PDHPE) syllabus was introduced into high schools in 1991 and in primary schools in 1992. Subsequently, the announcement that Sydney would host the Olympic Games contributed to an increasing interest in exercise and fitness, and the new State Government gave a commitment to address the fitness of NSW school students. These circumstances led to the allocation of substantial time in the school curriculum to physical education.

When the PDHPE syllabus was being developed, it was thought that vigorous exercise was necessary to promote greater health. In 1995 Dr Steve Blair, a leading North American researcher on the relationship between physical activity and health, was invited to Australia to describe the new epidemiological evidence that regular, brisk walking would provide substantial health benefits. Dr Blair's evidence was compelling. It led to intersectoral developments, including the Premier's Task Force on Physical Activity, which engaged non-health sectors and organisations, including the NSW Department of School Education, to contribute to the promotion of physical activity.

Regular contact between staff from the education and health sectors on the Premier's Task Force, and a clear willingness to understand each other's needs and interests, contributed greatly to the development and implementation of the NSW Schools Fitness and Physical Activity Survey. This Statewide survey was funded by the NSW Health Department, the Department of School Education and the National Professional Development Program. Its investigation team was drawn from the universities of Sydney, NSW and Wollongong and the Australian Catholic University, and included academics from education, epidemiology, health promotion, exercise science and paediatrics.

METHODS

The survey used stratified random sampling to select 45 primary schools and 45 high schools proportionally from the three NSW education sectors (independent, Catholic and Department of School Education). Schools from the most remote regions in the

north-west of the State were excluded because of prohibitive travel costs.

In primary schools one class was selected at random from each of Years 2, 4 and 6; in high schools, one class was selected at random from each of Years 8 and 10. Fourteen physical education teachers, representing all three education systems, were seconded for the project. These teachers were involved in the field work and were supported by several research officers with public health and education backgrounds.

There were good reasons for seconding physical education teachers to the project. They had valuable experience and skills, including an understanding of how schools function and of the needs of the teachers who would have to suffer demanding intrusions into their work. They were experienced in managing the students and in achieving their cooperation. In addition, the experience they gained from the survey was considered to be useful to them in their home schools.

A team of four field researchers visited each school to administer the tests. Students in Years 4, 6, 8 and 10 were assessed for height, weight, waist and hip girths, skinfold thicknesses, aerobic capacity, strength, muscular endurance, flexibility and six fundamental motor skills (catch, overhand throw, kick, run, vertical jump and forehand strike). Only height and weight were assessed in Year 2 students. Socioeconomic data were collected for all students, permitting stratification of survey data by age, sex, cultural background, socioeconomic background and location of residence (urban or rural).

Students in Years 8 and 10 were asked to complete a questionnaire on their physical activity habits, physical education classes, time spent in sedentary activities, attitudes to physical activity participation, behavioural modelling, support and encouragement to be active, barriers to activity participation, preferred activities and self-efficacy (confidence relating to difficult new behaviours). In addition, the school staff were asked to complete a questionnaire on physical activity facilities, equipment and school policies and practices. A 30-minute professional development session was offered to the schools, and teachers were asked to provide their reflections on the testing procedures.

It is our intention not only to present prevalence data on fitness and physical activity but also to identify the population groups most in need of support, and to try to identify personal, environmental and policy factors associated with fitness and physical activity.

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OUTBREAK OF GASTROENTERITIS IN A RESIDENTIAL COLLEGE

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This article describes the investigation of an outbreak of 40 cases of gastroenteritis at a residential college.

The Central Sydney Area Public Health Unit was contacted on June 17, 1996 with a report that several students from the college had presented to the same medical practice over the weekend (June 15-16) with gastroenteritis. Anecdotal evidence suggested it was usual for some students to report gastrointestinal symptoms at this time of year, when end-of-term examinations are held.

METHODS

As a matter of urgency, hygiene and infection control practices were reviewed with the college staff. Advice on how to minimise the spread of infection was given verbally both to staff and students. Information sheets describing the prevention and management of gastroenteritis were circulated to staff and displayed on student notice boards.

The kitchen area was inspected and found to be clean and well maintained. Methods of food preparation were reviewed with the chef and other kitchen staff, but no major problems were identified. Appropriate practices in food handling, storage and cooking, and general hygiene measures, were verbally reinforced. Samples of food prepared in the kitchens over the two weeks before the initial notification were not available for testing.

Case definition

The notifying doctor and the college's administrators were asked to compile a list of students who had

complained of gastrointestinal symptoms over the weekend.

A convenience sample of cases was interviewed so a broad case definition could be developed. An initial questionnaire was distributed, both to refine the case definition and to identify further cases. The questionnaire covered demographic details (age, sex, occupation at the college, whether resident at the college), symptoms (onset, duration, severity, use of health services), contacts, and meals eaten outside the college. The questionnaire was circulated to all college staff and residents.

Stool specimens from some of the cases and from five of the kitchen staff were collected for examination and culture.

Potential sources of infection

Results from the first questionnaire implied a food origin for the disease. A second questionnaire, based on the menus from June 10-15, was therefore given to a random sample of 40 students (20 cases and 20 controls) in an effort to determine the source of infection.

To discover whether food contamination was continuing, food samples were taken from the kitchens a week after the initial notification.

RESULTS

Fifteen suspected cases were identified by the notifying doctor and the college administration.

Case definition

All 20 staff completed the questionnaire, and 74 of 215 questionnaires were returned (a response rate of 34 per cent). After scrutiny of the responses, cases were defined as students or staff of the college presenting with diarrhoea (two or more runny stools

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PUTTING THE DATA TO WORK

A professional development package will be prepared and disseminated by the end of 1997, drawing substantially on the survey's findings. It will use the health-promoting school concept¹ as its framework and will address issues including support training for teachers, potential changes to school policy and practice, potential changes to the school environment, approaches to ensuring gender, socioeconomic and geographical equity, and approaches to engaging the support of parents, community organisations and other government sectors.

Looking further ahead, funding will be sought for controlled research to compare different approaches to promoting physical activity, physical skills and

fitness among young people; and there is a possibility of developing the survey process as a monitoring tool, repeating it every three to five years.

Many lessons in developing collaborative research links were gleaned from the survey process, including the need to be responsive to shifts in administrative priorities and community sentiment about specific issues, and the need to be prepared to seize opportunities as they arise. We concluded that public health professionals should not underestimate the power of congenial personal relationships in these collaborations, and that researchers should take time to listen to, and understand, the goals and interests of potential partners and the expertise offered to help them meet those goals as well as their own.

1. NHMRC Health Advancement Standing Committee. Effective school health promotion: Towards health promoting schools. Canberra: Australian Government Publishing Service, 1996.