Workplace physical activity and healthy diet interventions - what works?

There is strong evidence that multi-component workplace interventions that address physical activity, nutrition or both are effective for increasing physical activity, promoting healthy eating and preventing chronic diseases like obesity.

A recent PANORG Evidence Module synthesised findings and recommendations from multiple systematic reviews and recent reports relevant to workplace health promotion programs that aim to encourage physical activity, healthy diet or both, and prevent overweight and obesity.

The Evidence Module found that effective types of physical activity strategies included 1) providing prompts to encourage stair use, 2) providing access to places or opportunities for physical activity, and 3) providing education or peer support.

Effective types of nutrition intervention strategies involved modifying the food environment, including 1) food labeling, 2) point-of-purchase promotions, and 3) providing access and improving availability of healthy food choices.

Effective multi-component interventions also provided counselling or individual skills training, and involved employees in program development and implementation.

Further research on workplace interventions to promote physical activity, healthy diet or both is needed to increase the generalisability of programs to all workers and different population groups, as well as to build evidence on their long term effectiveness and economic efficiency.

This Evidence Module is available at: http://www.health.usyd.edu.au/panorg/pdfs/Evidence_module_Workplace.pdf
From the editor

Josephine Chau

If this first PRC newsletter of the year is anything to go by, it looks like 2010 will be another productive and eventful year for the Prevention Research Collaboration.

In this edition, we showcase the PRC’s ongoing contribution to policy and practice in a wide range of issues related to physical activity, nutrition and obesity. Our recent and current projects range from publishing a discussion paper on food insecurity, to updating the evidence on workplace physical activity and healthy diet interventions, and to measuring athletes’ knowledge and attitudes about anti-doping.

We maintain a focus on children’s physical activity and nutrition by examining factors which influence parents’ decisions about their children’s sports participation, and investigating food marketing to children via the internet. We also continue to conduct intervention research to promote healthy lifestyle in different settings.

It has been a great pleasure to jump into the Editor’s chair for this edition. I hope you enjoy reading about our recent activities and getting to know our team.

Recent PRC publications


Does promoting new bicycle paths increase cycling and physical activity?

CPAH has had a long tradition of investigating active transport and cycling and this recent project, conducted with Sydney South-west AHS, presents a real-world trial. The Cycling Connecting Communities (CCC) Project, a community-based cycling promotion program in low-economic areas of urban Sydney, examined the effectiveness of encouraging the use of newly completed off-road cycle paths.

In the intervention area, the local government areas of Liverpool and Fairfield, a range of community engagement and social marketing activities took place, such as organised bike rides and events, development of project resources and branding, free cycling skills courses, the distribution of cycling maps of the area and coverage in the local press. Evaluation of the project used pre- and post-intervention telephone surveys in 2007 and 2009 to over 500 randomly selected residents of Liverpool and Fairfield and a corresponding sample of residents living in the comparison area of Bankstown. Additionally, four bicycle counters were placed on the main bicycle paths in both areas to monitor daily bicycle use before and after the intervention.

Telephone survey results showed significantly greater awareness of the Cycling Connecting Communities project (13.5% vs. 8.0%) in the intervention area compared with the control area. Higher rates of cycling were evident in the intervention area (32.9% versus 9.7% in the comparison area) amongst those who were aware of the project. Bike count data also showed an increase in bicycle path use in the intervention area (28.3% versus 16.2%). However, there were no differences between the intervention and comparison areas in total mean minutes of physical activity or in the proportion of participants reaching the national physical activity guidelines.

New, innovative ways to transform increased awareness and participation in cycling into increases in population physical activity are necessary, such as more resources for social marketing and greater exposure. It is also essential that increases in cycling infrastructure be accompanied by other components of healthy urban planning such as increased destinations for walking and cycling, rail networks and decreases in urban sprawl.

Parents need time, money and options for kids’ organised sports

A recent survey conducted by PANORG\(^1\) found that parents report that the financial and time costs of children’s sport are significant factors which influence their decisions about their children’s participation. This was particularly relevant for families with lower incomes and in relation to daughters. For rural families, the limited range of sporting options was also a barrier.

Participation in organised sports makes a substantial contribution to children’s total physical activity levels, with about two-thirds of children aged 5 to 17 years old participating in organised sport outside of school hours. For most children, parents need to provide direct assistance, by paying for fees, uniforms and equipment, and transportation to and from venues. This study found that the most common recent expenses incurred by the parents were for sportswear, including shoes and entry fees. Unfortunately, there are no publicly available data on the costs of children’s sporting activities for families, although earlier PANORG research on families’ expenditure on active and passive (screen) recreation found that expenditure varied by income and socio-economic status, and was also influenced by other social factors\(^2\).

While the barriers identified in this study may be unsurprising, they are not easy to overcome. Despite the high degree of volunteer involvement and government subsidies, the costs of providing community organised sports are thought to be high and increasing; and are currently the subject of a study commissioned by the NSW Department of Sport and Recreation.

There is little research on how to overcome these barriers and increase the availability and accessibility of sports, particularly for the one-third of children not currently engaged in organised sports. Some suggestions for consideration and investigation comprise:

- Sporting libraries which allow children to borrow sporting equipment, so that children can try a range of activities at a lower cost
- Parent rosters and community transport arrangements to travel to sporting venues
- Introduction of a single transferable registration fee for a child, to offset accumulating costs of trialing and participating in multiple sports across a year.

References

Helping health professionals to promote healthy kids

Health professionals in the Western Child Health Network (WCHN) have been building their capacity in the new Promoting Health Kids program.

The Healthy Kids program provides training for health professionals, who work with families with children less than 12 years old. The program aims to increase their knowledge, skills and confidence to discuss child nutrition, physical activity and healthy weight with parents and families, assess children’s healthy weight range and provide the appropriate treatment and referral options.

Health professionals from across Sydney West Area Health Service (SWAHS), Greater Western Area Health Service, the Children’s Hospital Westmead and Divisions of General Practice in the WCHN have participated in the training program. Eighteen training workshops have been delivered in various locations and a program evaluation is currently in progress.

Pre-training surveys were completed by 178 out of 186 workshop participants. The survey found that 45-68% of workshop participants did not engage in the four healthy weight and lifestyle-related practices that form part of the Healthy Kids training objectives. Furthermore, while the majority of participants expressed positive attitudes and confidence about working with children and families with respect to healthy weight, nutrition and physical activity, just over half of them expressed a lack of confidence about giving parents and children appropriate and sensitive advice about child obesity and weight management. These findings highlight a possible gap in their work capacity that may benefit from this training program.

Healthy Kids is managed by SWAHS and PANORG is a partner in the program evaluation. The project is in the follow-up phase and the program evaluation findings will be prepared later this year.

Measuring Australian athletes’ knowledge and awareness of anti-doping

A research team from the PRC and Discipline of Exercise and Sport Science, University of Sydney is investigating the knowledge, awareness and attitudes of elite athletes and coaches to World Anti-Doping Agency policy.

The researchers conducted a pilot study in 2009 with a sample of over 100 elite and recreational athletes to develop a robust and reliable self-report questionnaire. This questionnaire is now being used in the primary study which aims to:

- Determine athletes’ awareness and knowledge of anti-doping policy and testing procedures;
- Investigate athletes’ level of knowledge about prohibited substances; and
- Examine athletes’ attitudes and behaviours towards doping in sport.

Over 2000 athletes and 300 coaches from across Australia, who are competing or coaching in more than 30 different team and individual sports, have participated in the study so far. Results will be used to establish future guidelines and education strategies for anti-doping.

This study is funded by the Anti-Doping Research Program in the Department of Health and Ageing, and is a collaboration between Adrian Bauman, Anne Grunseit and Rona Macniven from the PRC and Rhonda Orr and Matthew Grassmayr in the Discipline of Exercise and Sport Science.
PANORG, together with Cancer Council NSW and Heart Foundation NSW have prepared a discussion paper on food security - *Food Security: The what, who, why and where to of food security in NSW*. This paper identifies potential intervention points and options for action to address food insecurity, as well as research gaps and policy implications.

A key aspect of food security is to have physical and economic access to a sufficient, safe and affordable food supply. In NSW, around 5% of all people over 16 years experienced food insecurity in the previous twelve months. However, the prevalence rate is likely to be much higher amongst some population sub-groups, such as people living with disability, mental illness or HIV, and people from some disadvantaged cultural or socioeconomic groups.

Food insecurity may contribute to increased risk of chronic diseases such as cancer, heart disease and diabetes through an association with diet quality and overweight and obesity.


The authors would like to invite comment on the Discussion Paper which may be made by email to panorg@health.usyd.edu.au


**Healthy Living Program after Gestational Diabetes**

Hidde van der Ploeg, Nancy Cinnadaio and Melissa Warren from the PRC are working on a pilot study on the effectiveness of a lifestyle intervention program for women with previous Gestational Diabetes Mellitus (GDM) – known as HeLP-GDM.

Women who have had GDM are at increased risk to develop type 2 diabetes later in life. To prevent this, the study aims to improve nutritional and physical activity habits through a 6-month counselling intervention. The intervention by a dietitian comprises a mix of face-to-face and telephone contacts, supplemented with motivational text messages and post cards. The study is aiming to recruit 100 women and those who join the study are randomised to the intervention or control group. All women complete a 3-day food record and measure their physical activity using an accelerometer, at baseline and at 6 months follow up.
The Cyber-Diet: Internet food marketing to children

It has been suggested that pressures to reduce unhealthy food marketing on television have coincided with increased marketing through alternate media, including the Internet.

As part of PANORG’s collaboration with the Cancer Council NSW on food marketing research, the Cancer Council NSW conducted a 2009 study on internet food marketing patterns, to check if they had changed since 2007.¹ Both 2009 and 2007 studies measured the frequency of branded food references, (defined as a pictorial or written reference to a commercially available food brand or company) on children’s most popular websites. These websites included search engines, news, gaming, online shopping, movies and video.

The frequency of branded food references on children’s most popular non-food websites, (i.e. not for food products/companies), decreased five-fold: from 40 in 2007 to eight in 2009. Although, the actual number of websites containing any branded food references remained stable (six websites in 2009, seven in 2007), unhealthy foods remain the dominant type of food promoted, comprising 82% of references in 2007 and 88% in 2009.

This research did not include social networking sites, such as FaceBook, YouTube and MySpace, which are highly popular, being accessed by up to 41% of children. Further investigation of the food marketing practices of these websites is warranted, to determine if the volume of food advertising on the Internet has indeed reduced in recent years, or if there has simply been a shift towards social networking sites.

Meet and greet Deb Hector

Deb has recently returned to work with the PRC after a brief period working as a Research Coordinator in Mental Health Education. As a Research Fellow within PANORG, she is working closely with NSW Health on the NSW implementation of the National Partnerships Agreement on Preventive Health.

Deb has worked in the UK, Papua New Guinea, Africa and Australia in applied biological and agricultural research, and as a lecturer, for over 15 years, before switching disciplines and joining CPHN in 2000. Until 2008 Deb worked across a number of areas of public health nutrition and has particular expertise in the measurement and reporting of breastfeeding. Deb also spent much of her work time critically reviewing the literature in a number of areas of policy and planning, particularly contributing to the development of the NSW Health Breastfeeding Policy. Deb has ongoing interests in the food environment, the evaluation of public health programs and the integration of research into policy and practice.

In her spare time, Deb is an active member of the P&C at her son, Liam’s primary school; she belongs to a local book club and has recently started jogging regularly.

Meet and greet Kamalesh Venugopal

Kamalesh has been at the PRC since July 2009 and is employed as a Research Fellow – Biostatistician. He has migrated from New Zealand where he worked in a similar position for the Housing and Health Research Programme.

Kamalesh is a Trained Statistician and enjoys using his quantitative skills in the realm of public health. His research interests are data analysis, data mining and statistical modelling. He has published research papers on the epidemiology of tuberculosis, rheumatic fever and skin infections.

He has held various research appointments in India, Singapore and New Zealand for the last 15 years. He is a recipient of the Young Scientist award and the Chartered Statistician award by the Royal Statistical Society, UK.

Kamalesh is currently working on the International Prevalence Study on Physical Activity looking at the descriptive epidemiology of sitting and comparing 20 countries. He is also involved in evaluating the Get Healthy Information and Coaching Service.

PANORG: www.health.usyd.edu.au/panorg/
CPAH: www.cpaah.health.usyd.edu.au
CPHN: www.cphn.mmb.usyd.edu.au
Phone: (02) 9036 3271