Brunei Collaboration

Tim Gill, Anna Rangan, Jimmy Louie and Sinead Boylan from the PRC are working closely with the Brunei Ministry of Health on their National Nutrition Survey. Members of the Brunei Ministry of Health visited the PRC in March to undergo training in data collection and analysis. Through the Boden Institute of Obesity, Nutrition and Exercise (BIONE), the Brunei Ministry of Health has contracted the PRC’s public health nutrition researchers to provide advice and support on the design, implementation and analysis of their second National Health and Nutritional Status Survey (NHANSS). The survey, which has been organized to determine the dietary and health status of Brunei’s population, will be conducted in all four districts of Brunei. It will be carried out in two phases and will involve some 6,000 participants.

Valuable data will be collected on demographics, socioeconomic status, breastfeeding indicators, illnesses, body image and health behaviours such as smoking, physical activity and diet. Phase 1 has been completed recently with data collected on approximately 1,500 children (newborn to five year olds) randomly selected from child health clinics’ registrations. Members from BIONE, along with Dr Debra Hector from PANORG, have visited Brunei to discuss findings from Phase 1 and to prepare for Phase 2.

Phase 2 will focus on the population aged five to 75 and involve 4,500 people from 48 villages throughout the four districts. It is currently scheduled to begin within the next month. The chairperson of the NHANSS stated that it is hoped that the survey will form “the basis for the revamping and correcting of current health programs, as well as formulating new ones” (The Brunei Times, 29.03.09).
Children’s Sport: Who are the major sponsors?

Sport provides an opportunity for children to be physically active as well as a means to promote other health messages, such as healthy eating, to large numbers of children. The promotion of healthy eating can occur in a number of ways, including through food and drink company sponsorship arrangements.

While children typically engage in sport through local clubs and events, the funding of peak national and state sporting organisations may influence community sport. In particular, corporate sponsorship of peak organisations may filter down to community sports clubs, and the association between sponsors and peak organisations may indicate the acceptability of these corporations.

To determine the extent and nature of sponsorship arrangements at peak sporting organisations, researchers at the Prevention Research Collaboration examined 55 peak organisations’ websites for the nine most popular sports for children in NSW.

The sponsorship of peak sporting organisations was widespread, with 443 sponsors identified across all websites. Overall, 9% of sponsors were food and drink companies and 3% were alcohol manufacturers. Some websites also had information available about sponsored sports development programs and competitions (n = 16 different events). Many of these events were sponsored by food and drink companies (69%), and one was associated with an alcohol manufacturer. Again, the majority of food and drink and alcohol sponsors did not meet established criteria for healthy sponsors. McDonald’s Restaurants in particular sponsored a range of competitions and programs, including the McDonald’s Skill, Fun & Play program, which teaches basketball skills to primary school children; and McDonald’s Hoop Time, involving a one-day basketball competition series, with over 32,000 children involved from 480 schools in Victoria (Figure 1). Other McDonald’s sponsored programs included McDonald’s Kanga Cup soccer competition, McDonald’s State Track and Field Championships for athletics, McDonald’s Little Athletics Registration Program, and McDonald’s Find a Club, which allows children to find a soccer club in their local area.

Peak sporting organisations may act as role models to demonstrate appropriate sponsorship arrangements. The high levels of unhealthy food and drink sponsorship, particularly for children’s sporting programs, highlights the need for policy interventions to reduce these organisations’ reliance on unhealthy food and beverage sponsorship.

Figure 1. Website advertising McDonald’s sponsorship of the Hoop Time basketball competition.

“The majority of food and drink companies (63%) and alcohol manufacturers (100%) were considered to be less healthy, according to independently developed criteria for healthy sponsors.” - Bridget Kelly
Early prevention of childhood obesity: The Healthy Beginnings Trial

Professor Louise Baur from the PRC, one of the chief investigators of the Healthy Beginnings Trial, has provided an update of the early intervention program to prevent the development of childhood obesity.

In 2007, Drs Li Ming Wen and Chris Rissel, from Sydney South West Area Health Service Health Promotion Unit, with colleagues from the PRC at the University of Sydney, commenced an NHMRC-funded study, the Healthy Beginnings Trial.

First-time mothers from Liverpool and Campbelltown Hospitals were recruited antenatally to the study. The intervention group receives 8 home visits over the first 2 years from a specially trained community nurse delivering the staged intervention. The timing of the visits corresponds to milestones in early childhood development and parent-child interactions, particularly with regard to healthy feeding practice, nutrition and the development of gross movement skills necessary for being physically active. The control group receives usual care (one off visit by a community nurse) and intervention materials on home safety and smoking. The main outcome of interest is weight at age 2 years. The trial is still underway, with the 2 year outcome measurements due to be completed by the end of 2010. Many people are watching this trial with great interest!

The Healthy Beginnings Trial is also part of the Early Prevention of Obesity in Childhood (EPOCH) prospective meta-analysis involving three additional trials also underway in Australia or New Zealand. The other trials are:

- The Nourish study, which is underway in Brisbane and Adelaide and involves group programs on healthy approaches to infant feeding for mothers of first-time mothers who are recruited post-natally.

- The Infant Feeding And Nutrition Trial (InFANT), uses pre-existing mothers’ groups to provide an intervention around healthy eating and sedentary behaviour. The study is NHMRC-funded.

- The POI.NZ (Prevention of Obesity In New Zealand) involves antenatal recruitment of mothers who are randomized to receive one of four interventions looking at healthy eating & activity, or improving sleep behaviour.

These three studies, along with the Healthy Beginnings Trial, are among the very first internationally to look at prevention of obesity or obesity-related health behaviours in the first years of life. They are also measuring very similar outcomes, including weight, eating behaviours and sleep behaviours. For these reasons, the investigators decided to conduct a prospective meta-analysis (PMA). They were joined in this endeavour by Dr Lisa Askie, an epidemiologist from the NHMRC Clinical Trials Centre based at the University of Sydney.

More information
Healthy Beginnings Trial - Dr Li Ming Wen; lmwen@email.cs.nsw.gov.au
Nourish - Prof Lynne Daniels; l2.daniels@qut.edu.au
InFANT - Dr Karen Campbell; karen.campbell@deakin.edu.au
POI.NZ - Prof Barry Taylor; barry.taylor@otago.ac.nz
EPOCH PMA - Dr Lisa Askie; laskie@ctc.usyd.edu.au
Prof Louise Baur: louiseb3@chw.edu.au
Playground usage in a Sydney renovated park

Erika Goldbaum from the PRC recently evaluated the effects of a playground renovation on children’s physical activity behaviour. Park visitor behaviour in the playground of Redfern Park, an inner-city Sydney park, was observed before and after renovation.

After the park upgrade, the number of children in the renovated playground increased significantly by 8% with the number of boys increasing but girls decreasing. Interestingly, there was a 66% decrease in levels of moderate-to-vigorous physical activity (MVPA) in the renovated playground, with the decrease in girls’ MVPA more than twice that of the boys’. In contrast, there was no change in the number of children or their physical activity behaviour at a comparison park.

A second part of this study investigated parents’ perceptions of the renovated playground. Overall, the playground was viewed favourably. Parents’ main safety concern was the lack of fencing around the playground. Parents also complained of a lack of features like swings and slides. They described much of the new equipment, sculptures designed to function as play equipment, as “aesthetic but not functional” and “of limited value to kids”.

Playgrounds which not only entice parents to bring children but inspire children to engage in physical activity may help promote healthy lifestyles. Better understanding of the features which create such an environment can help guide future renovations to improve both playground usage and physical activity behaviour in playground users.

Maintaining effects of a staff walking program in SWSAHS

The PRC’s Dafna Merom has been researching the effects of a pedometer-focused workplace health promotion program in collaboration with the South West Sydney Area Health Service. The program was based on the successful Step by Step three-month self-help walking program plus an additional enhancement of the program over a further nine months using maintenance newsletters.

Participating staff, recruited via email and messages on payslips and the intranet and inactive at the start, were allocated to either the three month walking program and a pedometer (standard), or the three month program plus four maintenance newsletters over nine months (standard+maintenance). Participants who were still wearing the pedometer at the follow-up interview, and who found the pedometer to be very useful, were more likely to meet the public health recommendations for physical activity at 12 months.

These findings are encouraging as systematic reviews of the evidence of effectiveness of workplace physical activity programs are often inconclusive. This study shows how long-term increases in physical activity can be achieved, albeit that the additional component of maintenance newsletters did not lead to overall increases in physical activity over and above that of the basic intervention. Cost-effectiveness of the program was also a strength of the study as the low cost per participant ($33) makes the program feasible for other workplaces and settings.
Queen’s Birthday Honours

Congratulations to Professor Louise Baur, who received a Member of the Order of Australia in the recent Queen’s Birthday Honours list. It was awarded for service to medicine, particularly in the field of paediatric obesity as a researcher and academic; and to the community through support for a range of children’s charities.

Louise is chair of the Management Group at the Prevention Research Collaboration; and Deputy Associate Dean in the Discipline of Paediatrics and Child Health and consultant paediatrician at the Children’s Hospital at Westmead, where she is Director of Weight Management Services. She is also the founding editor of the *International Journal of Pediatric Obesity*, and a Director of World Vision.

President’s Award

Congratulations to PRC’s Professor Adrian Bauman who has been awarded the Heart Foundation’s *President’s Award*. This highly prestigious award is in recognition of Professor Bauman’s long service and contribution as Chairman and member of the Heart Foundation’s Board of Directors in NSW and a member of CVHAC.

The award is also an acknowledgement of Professor Bauman’s Chairmanship of numerous National Physical Activity Conferences and the collaborative efforts of Sydney University and the Heart Foundation in delivering the successful Australian Physical Activity Network (AusPAnet).

Nutrition, Behaviour, Mood and Learning: What are the connections?

Reza Amani (PhD, R Nutr), visiting Associate Professor of Nutrition from Jondi-Shapour University of Medical Sciences in Iran, has provided the PRC with an update on his research on the relationship between nutrition and behaviour.

There has been considerable debate about the nature and extent of interaction between emotions, states of mood, behaviours and food choices. It is possible that food choices and eating behaviours may be influenced by emotions and mood states via both psychological and/or physiological pathways. On the other hand, alteration of mood may be also be influenced by food choices and the eating of a particular food, or a combination of foods, which may alter mood, cognitive performance, psychological distraction and brain functions.

There are several mechanisms connecting nutrition and psychology sciences, of which the serotonin theory has received more attention. Briefly, it proposed that carbohydrates stimulate serotonin production and thus eating them is an attempt to self-medicate depression. High carbohydrate meals raise serotonin levels while fatty or protein rich meals tend to lower it.

Another issue that has been an area of interest is “chocolate craving” or “chocolate addiction”. Certain alkaloids have been isolated in chocolate that may raise brain serotonin levels. Both serotonin deficiency and ‘drug-like’ constituents including anandamines, caffeine, and phenylethylamine are involved in this theory.

There is a lot of evidence supporting the positive effect of consuming breakfast on short-term memory and concentration span in children. However, it should be kept in mind that most (not all) findings have been obtained from children who were not well-nourished. To sum up, it seems that diet/food (as a whole or food constituents) and behaviour/mood have a complex relationship via influencing brain neuronal activity and modifying specific neurotransmitters in a bidirectional pathway.
The Canadian organisers did an outstanding job in bringing together interesting speakers, having a conference that was well organised, streamlined and focused on physical activity and public health. The delegates at the meeting had a set of experiences that were interesting, informative and cutting edge in terms of public health science. The keynote speakers included George Davey Smith from the University of Bristol, as well as Jerry Morris and Jo Salmon from Deakin University, who spoke about children’s sedentary time. There were also many symposia around sedentary behaviours and a sharing of experiences from physical activity professionals in the Asia Pacific Region, Latin America, Europe, Africa and North America. The conference was particularly well represented by Australians, including several PRC staff.

A highlight of the conference was the launch of the Toronto Charter for Physical Activity. This Charter will be a landmark document for assisting countries, regions and policy makers to engage in a public health approach to promoting physical activity.

6th World Congress on Prevention of Diabetes and its Complications. Dresden, Germany 8–11 April

This was a successful event attended by 940 people from 69 countries. The meeting’s aim was “Prevention in Practice” which was debated in 23 sessions, 5 plenary sessions and several workshops. Magnolia Cardona, from PRC, presented two papers. One of the highlights was the launch of the book “Prevention in Practice”, which summarises prevention practice experiences from 22 partners worldwide, including the Sydney Diabetes Prevention Program. Other highlights were the release of The ‘IMAGE practical toolkit’ containing practical recommendations for people interested in implementing diabetes prevention programs, as well as the curriculum for the training for prevention managers.

The congress promoted the international worldwide network “Who are Active in Diabetes Prevention”, www.activeindiabetesprevention.com, a one-stop-shop which exchanges the WCPD materials and diabetes related information.

ILSI Symposium on Saturated and Trans Fats, Sydney, 17 June

Amina Khambalia from the PRC attended this local event in June. Highlights of the symposium included:

- Dr. Barbara Meyer, University of Wollongong, presenting data from the 2007 Australian National Children’s Nutrition and Physical Activity Survey showing that Australian children (2-16 years old) are still consuming too much saturated fat and not enough long polyunsaturated fats.

- Dr. Dorothy Mackerras, Chief Public Health Nutrition Adviser from Food Standards Australia and New Zealand, presented positive news that the mean intake of trans fats in Australians has remained low and the upper end of the intake distribution has fallen in recent years.

- Dr. Chakra Wijesundera, CSIRO Food and Nutritional Sciences, showed data on the content of trans fats in selected food products in Australia, which were low compared to Europe, Canada and USA. Many popular food outlets have voluntarily replaced trans fat containing frying oils with healthier oils. Low levels of trans fats have been achieved by substituting trans fats for highly saturated fats.

- Dr. Russell Keast, Deakin University showed evidence of fat taste mediated via fatty acids and discussed how sensitivity to fatty acids may play a role in energy and fat intake regulation and ultimately determine body weight.
Meet and greet Amina Khambalia

Amina has been working at PRC as a Research Fellow since February 2010. Amina recently migrated to Sydney from Toronto, Canada where she completed a Masters in Epidemiology and a PhD in Nutritional Sciences. Her PhD project took her to Bangladesh where she led a double-blind randomized controlled trial examining periconceptional iron and folic acid supplementation on biochemical iron markers before and during pregnancy. During a 6-month fellowship at the University of Malaya, Malaysia, Amina lectured in epidemiology and nutrition, in addition to completing a systematic review on the prevalence of overweight and obesity among adults and children in Malaysia. Since working at PRC, Amina has become involved in research examining the psychometric properties and estimates of population measures for monitoring physical activity, nutrition and weight, and has conducted secondary data analyses of state and national surveys to examine risk factors related to physical activity and nutrition.

In her spare time, Amina enjoys yoga, hiking, cooking and exploring Sydney. In April of this year, Amina celebrated her wedding in Sydney.

Meet and greet Bronwyn McGill

Bronwyn has been at the PRC since May 2009 and is employed as a Research Assistant within the Cluster for Physical Activity and Health. She has been working on various projects including the Sydney Parks Study, the Get Healthy Service, the Social, Economic and Environmental Factors (SEEF) Project Pilot Study as well as tutoring for the School of Public Health.

After fifteen years of working in pediatric occupational therapy, Bronwyn completed a Master of Public Health in 2008 to embark on a career “re-direction”. Previously, she had worked in a variety of pediatric settings in Australia and the UK, mainly with children who have a physical disability, and primarily at the Children’s Hospital at Westmead. As part of her role as an occupational therapist, Bronwyn was involved in the teaching and clinical supervision of students from a number of universities. The change from individually-focused clinical work to the bigger-picture public health issues has opened up a number of areas of interest. For the moment, a steep learning curve in the area of physical activity and health is keeping her challenged and providing opportunities for a range of new experiences.

Besides being involved in her children’s very full lives, Bronwyn enjoys playing tennis, cycling and piano lessons.

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