

# AUSTRALIAN AND NEW ZEALAND JOURNAL OF PUBLIC HEALTH

Using the *Australian and  
New Zealand Journal of  
Public Health* as a research  
and teaching resource

**Volume 1: Survey research**

**Editor: Priscilla Robinson**



## **The first e-book from PHAA**

Survey research provides the foundation data for much of public health practice. This selection of key articles on survey research is intended to be useful to research methods teachers and researchers.

This first e-book includes a selection of papers from ANZJPH. It covers a range of survey research styles and types. Many other examples are to be found in ANZJPH.

In publishing this e-book, our primary aim is to provide a service to PHAA members. PHAA members should be able to access this virtual book, free, through the PHAA website (members' resources area), where you will find the hyperlink for each paper.

Non-members are encouraged to become PHAA members in order to access this resource (as well as many other benefits). Those in organisations with institutional membership of PHAA will be able to gain access through their libraries.

Several further e-books are planned, and suggestions for additional topics are welcome.

## Foreword

**Priscilla Robinson**

*Editor, Australian and New Zealand Journal of Public Health*

Surveys provide one of the cornerstones of public health research and practice. The research methods used in public health survey research yield less robust evidence for interventions than either clinical trials or laboratory research; the conditions in which surveys are conducted are largely uncontrolled and might therefore be subject to bias in data collection and interpretation. Public health interventions (such as immunisation and screening programs) are important, and need of course to be developed through clinical trials. But these interventions cannot happen without good quality surveys to tell us about the epidemiologic triad, 'who, when and where' of a public health problem. The results that surveys produce are critical for the development of public health interventions and for supporting public health policy.

Teachers of public health are constantly searching for interesting, high quality examples to use as teaching materials, but high quality examples of public health research are surprisingly hard to find. However, the *ANZJPH* is a major publisher of public health survey research, and this has prompted us to provide a collection of survey research papers, in particular as a tool for teaching public health.

This e-book is organised into five sections, covering methodological issues in conducting surveys, population survey methods, group survey methods, Indigenous health surveys and surveys of hard-to-reach populations. The papers have been selected to provide a smorgasbord of survey methods, with a variety of topics, methods, problems, solutions and analytical approaches offered. We have excluded papers that do not include a complete methods section, as in this collection we wanted to show both the methods used and results generated. However, we have included a series of papers each of which address a specific methodological complication within the chosen design.

The many problems encountered in the conduct of public health surveys make for important limitations in interpretation of results, so it is good that researchers pay attention to both the problems and the problem solving, and are prepared to write about them. The methodological issues in conducting surveys are important because of the potential for bias in subject selection, for confounded sample populations, leading to problems in interpretation of results. This book begins with a section about methodological issues, and leads with an editorial about highlighting – celebrating – the study limitations, and acts as a reminder that experienced authors will provide information about the limitations of their research, providing the reader with a guide about the usefulness of the work, and the strength of the evidence generated. The section includes a collection of papers about response rates, including the general problem of low response rates, different response rates in case compared with control subjects, and participant attrition.

Data quality and validity is a critical issue in research, and is analysed in considerable depth in three papers. In Australia, following the introduction of laws about privacy, public health research became a whole lot harder, as the usual means of identifying and linking populations became impossible, and the problem of privacy as a hindrance to research is discussed, with a cautionary tale about deriving case-generated codes. The use of different ways of collecting data about the same problem (in this case physical activity) from different populations using different methods and different surveys highlights the important message that the results can not be directly compared, even though on the face of it maybe they could be – and probably often are; and lastly we include a paper in which the researchers used different methods (CATI self-report biometric testing) for collecting the same information from the same people, showing that in general people underestimate their weight and overestimate their height.

There are a number of different types of surveys that are commonly used in public health, and we provide here some examples of methods of surveying populations and some specific groups. Population studies may be too large to report both method and results in one paper, so we include here both the methods for conducting the large cross-sectional Australian Study of Health and Relationships in over 20,000 Australian adults, and one of the specific outcome papers about knowledge of sexually transmitted infections and blood-borne viruses. As a contrast, we have included a cohort study, of the effect of maternal smoking in pregnancy on the smoking habits of the more than 7,000 offspring at 21-years of age. A population survey about attitudes to smoking bans in a randomly selected sample of households in New South Wales is included to show how an effective, albeit not unusual, strategy for random selection is undertaken. The researchers in both the second wave survey of the Australian Longitudinal Study on Women's Health and the 1997 Active Australia measured levels of activity in nearly 13,000 women and men (mainly women) over 45 and show how they analysed activity measures, with important conclusions for public health interventions.

We include a series of studies on groups of people with important problems to show how such groups are identified and contacted. These include a case control study of the risk factors for asthma deaths, with two control groups; a cross-sectional study of the association between obesity and various emotional disorders; and we include two contrasting studies about influenza immunisation, one a national survey of the prevalence in Australians over 40 years old; and the other a multistage cluster study of the prevalence of vaccination in aged care residences in South Australia – a similar question, but very different approaches. The health of younger Australians is the concern of another three studies: a cross-sectional CATI survey of community attitudes to papillomavirus vaccination; the effect of unemployment on health; and a study of surfers about drowning risk knowledge.

Indigenous health is never far from our thoughts, and these papers show how valuable public health research can be done without necessarily undertaking a clinical study. The first paper in

this section describes a systematic standardised survey of housing and living conditions in 132 Indigenous communities in four states between 1999 and 2006. The second is about measuring smoking patterns, but instead of measuring smoking in people the authors conducted an audit of wholesale and point-of-sale data. The third paper examines data collected as a part of the 2002 National Aboriginal and Torres Strait Islander Social Survey to identify the social determinants for non-smoking in Indigenous people, with some startling results. The effects of racism was studied through a cross-sectional survey conducted in rural Australia; and the ATSI health research workforce was surveyed through an e-mail and post survey of all people who had either been an author on a paper or published a higher degree thesis in the field of Aboriginal health between 1995 and 2004, identifying more than 1,000 ATSI researchers.

The last section of this e-book concerns the methods used to involve hard-to-reach populations in surveys. First, we turn to a survey of a cohort of new injecting drug users who have a high rate of hepatitis C, pointing the way for policy change. Next, even though the study designs will be similar, finding acceptable ways to include cross-sections of young men living in rural Victoria in STI screening surveys and homeless people in Sydney in a survey of violent experiences in Sydney require very different recruitment techniques. And lastly, we have included a survey of 'tweeneys', children between 10 and 13 years, in which a cohort of more than 1,000 children completed screen diaries (recording TV, cinema, computers and video games times).

We hope there is something in this book for everyone, with examples for lecturing and tutorial use for students at all stages of learning about the importance of good public health surveys.

## Acknowledgement

Jeanne Daly is gratefully acknowledged for the original idea, and for collegial support and critical feedback in the production of this e-book.

### Journal contact details

**Mail:** *Australian and New Zealand Journal of Public Health, PO Box 351, North Melbourne, Victoria 3051.*

**Street deliveries:** *c/- SUBStitution Pty Ltd, 1st Floor, 484 William Street, Melbourne, Victoria 3003.*

**Phone:** (03) 9329 3535 **Fax:** (03) 9329 3550

**E-mail:** [anzjph@substitution.com.au](mailto:anzjph@substitution.com.au)

## Methodological issues

- Celebrate your limitations *Aust N Z J Public Health*. 2009; 33:304-5  
*John B. Lowe*
- Do low control response rates always affect the findings? Assessments of smoking and obesity in two Australian case-control studies of cancer *Aust N Z J Public Health*. 2009; 33:312-9  
*Nirmala Pandeya, Gail M. Williams, Adèle C. Green, Penelope M. Webb and David C. Whiteman*
- A very low response rate in an on-line survey of medical practitioners *Aust N Z J Public Health*. 2008; 32:288-9  
*Campbell Aitken, Robert Power and Robyn Dwyer*
- Comparison of surveys used to measure physical activity *Aust N Z J Public Health*. 2004; 28:128-34  
*Wendy Brown, Adrian Bauman, Tien Chey, Stewart Trost and Kerry Mummery*
- Attrition in longitudinal studies: who do you lose? *Aust N Z J Public Health*. 2006; 30:353-61  
*Anne F. Young, Jennifer R. Powers and Sandra L. Bell*
- A privacy challenge to longitudinal study methods: patient-derived codes *Aust N Z J Public Health*. 2006; 30:350-2  
*Fiona J. Clay, Joan Ozanne-Smith, Wendy Watson, Melinda Congiu and Barbara Fox*
- How valid are self-reported height and weight? A comparison between CATI self-report and clinic measurements using a large cohort study *Aust N Z J Public Health*. 2006; 30:238-46  
*Anne W. Taylor, Eleonora Dal Grande, Tiffany K. Gill, Catherine R. Chittleborough, David H. Wilson, Robert J. Adams, Janet F. Grant, Patrick Phillips, Sarah Appleton, Richard E. Ruffin*

## Population Surveys

- Sex in Australia: The rationale and methods of the Australian Study of Health and Relationships *Aust N Z J Public Health*. 2003; 27:106-17  
*Anthony M.A. Smith, Chris E. Rissel, Juliet Richters, Andrew E. Grulich, Richard O. de Visser*
- Sex in Australia: Knowledge about sexually transmissible infections and blood-borne viruses in a representative sample of adults *Aust N Z J Public Health*. 2003; 27:230-3  
*Andrew E. Grulich, Richard O. de Visser, Anthony M.A. Smith, Chris E. Rissel and Juliet Richters*
- Maternal smoking during pregnancy predicts nicotine disorder (dependence or withdrawal) in young adults – a birth cohort study *Aust N Z J Public Health*. 2009; 33:371-7  
*Frances V. O'Callaghan, Abdullah Al Mamun, Michael O'Callaghan, Rosa Alati, Jake M. Najman, Gail M. Williams and William Bor*

Comparison of estimates of population levels of physical activity using two measures *Aust N Z J Public Health.* 2000; 24:520-5  
*Wendy J. Brown and Adrian E. Bauman*

Is government action out-of-step with public opinion on tobacco control? Results of a New South Wales population survey *Aust N Z J Public Health.* 2008; 32:482-8  
*Raoul A. Walsh, Christine L. Paul, Flora Tzelepis, Elizabeth Stojanovski and Anita Tang*

## Group Surveys

Risk factors for asthma deaths: a population-based, case-control study *Aust N Z J Public Health.* 1999; 23:595-600  
*Bin B. Jalaludin, Mark A. Smith, Tien Chey, Neil J. Orr, Wayne T. Smith and Stephen R. Leeder*

Association of obesity with anxiety, depression and emotional well-being: a community survey *Aust N Z J Public Health.* 2003; 27:434-40  
*Anthony F. Jorm, Ailsa E. Korten, Helen Christensen, Patricia A. Jacomb, Bryan Rodgers and Ruth A. Parslow*

Prevalence and determinants of influenza vaccination in Australians aged 40 years and over – a national survey *Aust N Z J Public Health.* 2005; 29:35-7  
*Peter W. Horby, Alison Williams, Margaret A. Burgess and Han Wang*

Prevalence of influenza vaccination in South Australian aged care homes *Aust N Z J Public Health.* 2005; 29:38-43  
*Tiffany Gill, Anne W. Taylor, Ann Kempe, Sandra Pickering and Maureen Watson*

A cross-sectional survey to assess community attitudes to introduction of Human Papillomavirus vaccine *Aust N Z J Public Health.* 2007; 31:235-42  
*Helen Marshall, Philip Ryan, Don Robertson and Peter Baghurst*

Is the health of young unemployed Australians worse in times of low unemployment? *Aust N Z J Public Health.* 2009; 33:79-82  
*Justin Newton Scanlan and Anita C. Bundy*

Self-reported water and drowning risk exposure at surf beaches *Aust N Z J Public Health.* 2009; 33:180-8  
*Damian Morgan, Joan Ozanne-Smith and Tom Triggs*

## Indigenous Health

The state of health hardware in Aboriginal communities in rural and remote Australia *Aust N Z J Public Health.* 2008; 32:7-11  
*Paul J. Torzillo, Paul Pholeros, Stephan Rainow, Geoffrey Barker, Tim Sowerbutts, Tim Short, Andrew Irvine*

Monitoring local trends in Indigenous tobacco consumption *Aust N Z J Public Health.* 2009; 33:64-6  
*David P. Thomas, Vanessa Johnston, Joseph W. Fitz and Joseph McDonnell*

The social determinants of being an Indigenous non-smoker *Aust N Z J Public Health*. 2008; 32:110-6  
*David P. Thomas, Viki Briggs, Ian P. S. Anderson and Joan Cunningham*

It's enough to make you sick: the impact of racism on the health of Aboriginal Australians *Aust N Z J Public Health*. 2007; 31:322-9  
*Ann Larson, Marisa Gillies, Peter J. Howard and Juli Coffin*

Exploring the characteristics of the research workforce in Aboriginal and Torres Strait Islander health *Aust N Z J Public Health*. 2008; 32:12-18  
*Alice R. Rumbold, Joan Cunningham, Ross S. Bailie and Janet E. Hiller*

## Hard-to-reach populations

The feasibility of recruiting young men in rural areas from community football clubs for STI screening *Aust N Z J Public Health*. 2007; 31:243-6  
*Judy Gold, Jane Hocking and Margaret Hellard*

High hepatitis C incidence in new injecting drug users: a policy failure? *Aust N Z J Public Health*. 2007; 31:30-5  
*Lisa Maher, Jiong Li, Bin Jalaludin, Kerry G. Chant and John M. Kaldor*

Factors associated with violent victimisation among homeless adults in Sydney, Australia *Aust N Z J Public Health*. 2009; 33:347-51  
*Sarah Larney, Elizabeth Conroy, Katherine L. Mills, Lucy Burns and Maree Teesson*

Screenieboppers and extreme screenies: the place of screen time in the time budgets of 10–13 year-old Australian children *Aust N Z J Public Health*. 2006; 30:137-42  
*Tim Olds, Kate Ridley and Jim Dollman*

# AUSTRALIAN AND NEW ZEALAND JOURNAL OF PUBLIC HEALTH

The Australian and New Zealand Journal of Public Health is the Journal of the Public Health Association of Australia and is published six times a year, in February, April, June, August, October and December. Its contents are subject to normal refereeing processes. Finished discussions of research projects are the staple diet of the Journal, but there is space for reviews, views and historical pieces from time to time.

The Journal is indexed by Australian Public Affairs Information Service, Current Contents, Excerpta Medica, Index Medicus, the Cumulative Index to Nursing & Allied Health Literature and Social Sciences Citation Index and is available on microfiche from University Microfilms International.

Most of the disciplines embraced by PHAA publish journals that carry articles about facets of health, illness and health care. However, there is no other Australian Journal that gives an overview of research across the broad range of PHAA interests, nor does any other journal aim to attract more than one or two of the many levels of workers in health care assessment and delivery.

The Australian and New Zealand Journal of Public Health invites contributions which will add to knowledge in fields of interest. It will give priority, after normal refereeing processes, to papers whose focus and content is specifically related to public health issues.

To subscribe to the journal visit: <http://www.phaa.net.au/journalSubscriptions.php>

