women's health australia

Annual Report 2002

The University of Newcastle Australia

Australian Longitudinal Study on Women's Health

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Director's Report

The Australian Longitudinal Study on Women's Health has now completed its seventh year and continues to grow in complexity and in value. The project, funded by the Commonwealth Department of Health and Ageing since 1995, is designed to provide a longitudinal perspective on the changing health needs of women throughout Australia, in order to inform government policy and practice.

Its main strengths are its large and representative survey sample, its multidisciplinary perspective, and most importantly its longitudinal nature.

The survey is the largest of its kind ever conducted in Australia, tracking over 40,000 women selected from the Australian population in three age groups. The women were aged 18-23 (younger), 45-50 (mid-age) and 70-75 (older) when first selected in 1996, and the project will follow these women over 20 years as they pass through the transitions and milestones of adult life. The women were selected randomly, with deliberate over-representation of women living in rural and remote areas so that this important population subgroup is well represented in the data. Each year the research team surveys one age group, on a rolling basis, as well as carrying out analysis and conducting substudies with smaller groups with particular characteristics.

Considerable efforts are expended on maintaining the interest and involvement of the women who participate, so that the samples remain representative of women from all backgrounds and walks of life as the years pass. Strategies such as sending an annual newsletter to all participants and taking up all opportunities for media coverage help to remind participants of the project and its value, while the behind-the-scenes team of phoners and trackers keep participants' contact details up to date.

The survey covers a much wider range of topics than traditional views of "women's health," with their emphasis on reproduction, might suggest. Women's physical and emotional health, use of medical and health services, personal and family circumstances, health habits and daily lives are all considered in an effort to understand women's health in its social and personal context.

The research team comprises experts from a wide range of disciplines including epidemiology, nutrition, sociology, statistics, psychology, and medicine. Research and project work is centred at the University of Newcastle, with a strong and growing node at the University of Queensland. It also involves researchers, associates and students at seven other Australian universities and is increasingly developing international links.

Its longitudinal nature is what gives the project its uniqueness

and ability to provide valuable information. The fact that the same women are tracked across many years, and that data are linked at an individual level, mean that the effects of life changes can be mapped. It also means that the impacts of changes in health policy and practice on women's health and well-being can be assessed.

This year's Report focuses on some of the longitudinal outcomes of the project so far. Longitudinal data analysis is a complex process which itself cannot commence until each survey has been processed, data quality checked, and cross-sectional relationships among the variables understood. Increasingly, however, the project is producing valuable insights into the ways in which women's health changes in response to life changes, and into the effects that changes in policy have on women's well-being.

This year has been a busy one for everyone involved in the project. As usual, the team has cleaned and checked the data from last year's main survey, carried out this year's annual survey, prepared and piloted next year's main survey, and carried out a series of interlocking analyses and substudies. This year has also seen the main office moved from one location to another within Newcastle, and a major scientific review of the project, which will determine the level of funding for the next five years. I am confident about the future of the project, and the team's continuing ability to produce high quality, policy-relevant research findings.

Annette Dobson

Project Director

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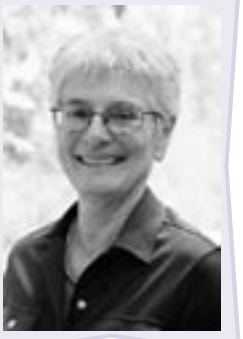

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Some of the staff members

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Congratulations to our successful graduates - 2002

Dr Sue Outram, PhD
Dr Samantha Hollingworth, MPH

Why a Longitudinal Survey?

What makes Women's Health Australia such a valuable source of information is the fact that it is longitudinal. That is, the research team surveys the same women on a regular basis throughout the life of the project, gradually building up a long-term picture of how women's lives change over time. The confidential linkage of successive surveys means that it is possible to explore changes in the lives of women. This design provides a much stronger basis for understanding health needs than does the more usual cross-sectional survey. Even the national census, despite being repeated every five years, does not allow this level of individual linkage over time and thus cannot answer questions about health across life changes.

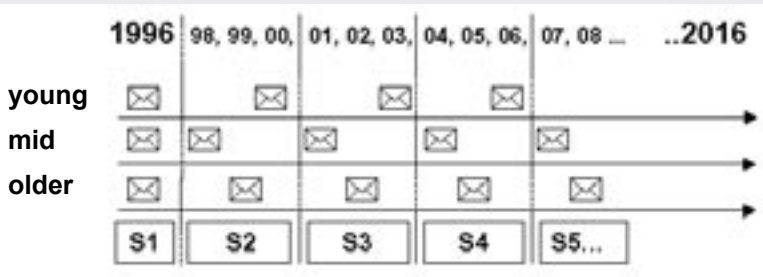
For example, most of the younger women were single and childless at Survey 1 in 1996. By 2000, the proportion who were mothers had risen from 8% to 17% and the proportion in permanent relationships had risen from 20% to 35%. As we have data for many women both before and after they reach these major life changes, and from others who have yet to reach these milestones, we are able to draw strong inferences about the effects that such changes have on women's health. At the other end of the lifespan, the older cohort are increasingly facing bereavement, with widowhood becoming normative among women in their eighties. The longitudinal data can be used to explore the short-term impact of bereavement, and the longer term process of adjusting to widowed life, and to draw inferences about how best to deal with this inevitably difficult life transition.

Another benefit of a longitudinal study is that it provides a method of evaluating the effects of changes in policy and practice. For example, rural women report lower levels of access to a range of medical services, including female GPs, after-hours services, and bulk billing. Government efforts to improve services to rural areas may be evaluated by examining changes in the perceptions of access among rural women. Linkage with Medicare records further enhances the ability of the longitudinal project to assess changes in policy and practice. The Enhanced Primary Care service has recently been included as a new Medicare item number. The project will be able to examine which older women are receiving this service, whether the same women receive it annually, and what personal and demographic characteristics these women have. This enables the researchers to provide information on the extent to which the uptake of this service is matching areas of greatest need.

Longitudinal research involves a number of challenges. Perhaps the most important of these is maintaining respondents' participation across the years. Not only is it important to maintain the women's interest in and commitment to the project, it is also essential to keep track of their current whereabouts and contact details. Annual newsletters are one way in which we are able to remind the participants of the value of the project and inform them of some of the outcomes. The research staff spend a great deal of time and effort in tracking women whose details have changed; while many let us know of changed circumstances, others may forget and we have to employ a number of methods to locate them.

We owe a huge debt of gratitude to the women who contribute to the project by completion of surveys over a number of years, and we have a responsibility to them to continue to collect good quality data so that health services, policy and practice are better attuned to the changing needs of Australian women of all ages.

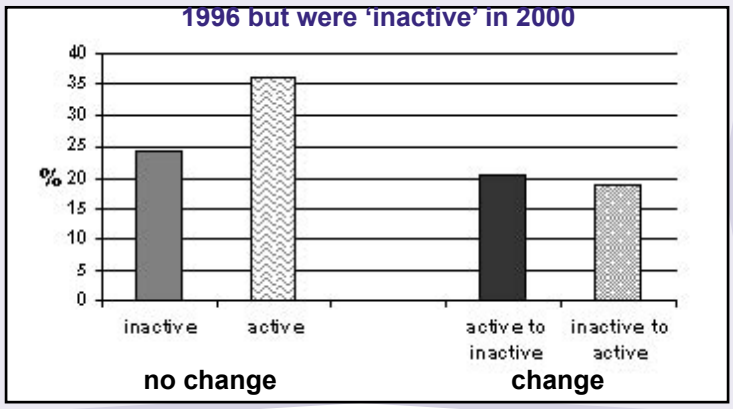
Schedule of main surveys



Young Women: Maintenance and Change of Health Habits

The long-term maintenance of behaviours such as physical activity and healthy eating is important for the prevention of serious but common diseases such as diabetes, arthritis, and cardiovascular disease. Longitudinal analysis is useful in understanding the correlates of the adoption, maintenance and cessation of these health-related behaviours, and several related analyses are currently in progress or recently completed which shed light on this issue.

One fifth of the women were classified as 'active' in 1996 but were 'inactive' in 2000



Cross-sectionally, Surveys 1 and 2 of the younger cohort (aged 18-23 at Survey 1, and 22-27 at Survey 2) show that the number of overweight women had risen from 20% to 31.5%; the number of women who were not physically active had barely changed, from 43% to 44%. However, these cross-sectional snapshots disguise huge variation. Looking at the data longitudinally show that 44% of the young women had maintained their weight, while 15% had lost weight and 41% had gained. And while the overall rate of physical activity had not changed, about 20% of the younger women had changed from active to inactive, and a similar number had changed from inactive to active.

Separate analyses of the correlates of these changes – one on weight, conducted by Kylie Ball, Wendy Brown and David Crawford, and one on physical activity, conducted by Wendy Brown and Stewart Trost – showed remarkably similar results.

Patterns of physical activity, and weight, appear to change in line with the major transitions of young adulthood. Increases in weight and decreases in physical activity were most common among those young women who had married; moved from full-time study to paid work; or had a baby. By contrast, returning to study was linked with increases in physical activity.

Similarly cigarette smoking changed: some women took up smoking for the first time while others quit. Liane McDermott, with Anne Russell and Annette Dobson, has shown how adoption of smoking by women in their early twenties was related to starting work, and a lifestyle of partying (including binge drinking). In contrast women who gave up smoking did so when they became married and had children.

The data suggest that times of change in women's personal lives are associated with changes in health habits. While young women are focusing on major adjustments in their family and working lives, the extent to which they pay attention to their own health may be diminished. As major life changes are a normal part of life for women in their twenties, these may be crucial years that lay the foundations for lifelong health habits. The challenge for health promotion is to find ways of encouraging the maintenance or adoption of good health habits during these times of change, so that the young women of today have the best chance of remaining in good health as they become older.

References

Ball K, Brown W & Crawford D. Who does not gain weight? Prevalence and predictors of weight maintenance in young women. *International Journal of Obesity*, in press.

Brown WJ & Trost SG. Life transitions and changing physical activity patterns in young women. *American Journal of Preventive Medicine*, submitted 2002.

McDermott L, Russell A & Dobson A. Cigarette smoking among women in Australia. *Report for the National Tobacco Strategy*. 2002.

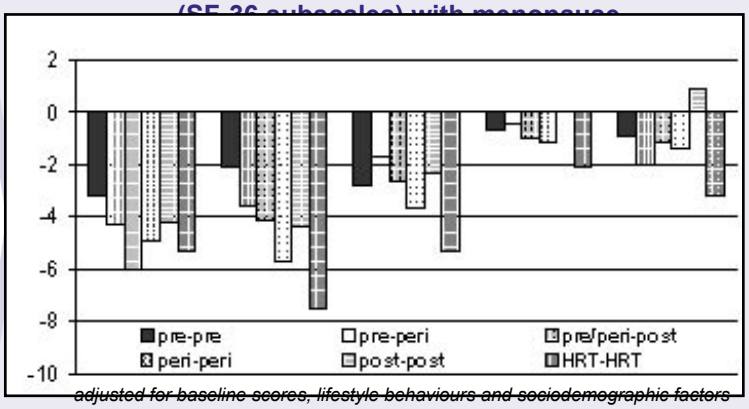
Mid-age Women: Maintaining Well-being through the Menopause Transition

Menopause occurs as part of normal ageing in healthy women, at an average age of around 51 years. There is, however, considerable variation among women in the timing of the onset of the menopause, the duration of the peri-menopause, and the extent to which symptoms or reductions in well-being are experienced.

The longitudinal data from the mid-age women (aged 45-50 at Survey 1, and 47-52 at Survey 2) have been used to explore changes associated with the menopause, and to compare those who use hormone replacement therapy (HRT) with those who do not. Analysis conducted by Gita Mishra, Wendy Brown and Annette Dobson explored changes in well-being – as measured by the SF-36 scale of health related quality of life – across two surveys, according to categories of menopausal change. Cross-sectionally at Survey 1, those women who were pre-menopausal scored higher on all measures of both physical and emotional well-being, with peri- and post-menopausal women scoring less well and those using HRT scoring lowest on every measure.

However, it was the change in well-being over two years between surveys that provided the most interesting data. While all participants showed reductions in self-reported well-being over time, the degree of reduction was lowest for those women who remained pre-menopausal across the two surveys. Surprisingly, the group who showed the greatest negative change was those who were taking HRT at one or both times. Of course, women choose to take HRT on the advice of their doctors, usually because they are experiencing symptoms or reductions in well-being, but it is somewhat surprising that the degree of negative change was also greater than for those women undergoing natural menopause. Further research is exploring a range of possible explanations for this reduction in well-being.

Changes in physical and social functioning (SF-36 subscales) with menopause



adjusted for baseline scores, lifestyle behaviours and sociodemographic factors

PF=Physical Functioning RP=Role Physical SF=Social Functioning
MH=Mental Health VT=Vitality

There has been considerable debate about the extent to which menopausal symptoms – such as hot flushes and night sweats – are biologically or culturally mediated. Women in some countries report much lower rates of these symptoms than do women from others. But this in itself does not necessarily mean that they do not experience the symptoms; it could be that they are not as concerned by them, or that it is not usual to discuss such experiences in some cultures. With over 20% of the mid-age women born outside Australia, it was possible for Gita Mishra and Christina Lee to conduct an analysis of menopausal changes and symptoms according to country of birth.

As expected, women from Asian countries were less likely than others to report the menopausal symptoms of hot flushes and night sweats. But the longitudinal data showed that these women were passing through the menopausal transition more quickly than others. A significantly higher proportion moved from pre-menopause to post-menopause in the two years between surveys. Statistical analysis suggested that it was this shorter peri-menopause that explained the lower levels of symptoms. Reasons why women from Asian countries might pass through menopause more quickly than women from other countries remain to be explored, but this finding does suggest that menopause experiences do differ across countries of origin.

References

Mishra GD, Brown WJ & Dobson AJ. Physical and mental health: changes during menopause transition. *Quality of Life Research*, in press.

Mishra G, Lee C, Brown W & Dobson A. Menopausal transitions, symptoms and country of birth: The Australian Longitudinal Study on Women's Health. *Australian and New Zealand*

Older Women: Keeping Active, Keeping Healthy, Keeping Happy

The older cohort of Women's Health Australia is a particularly valuable one, and its value will increase as time passes and the women age. While it is inevitable that an increasing number of the older women will become unable to complete surveys, and that a growing proportion of them will die in each passing year, it is also the case that many older women maintain healthy, active lives and strong community involvement. Analysis focusing on the predictors of continued well-being and independence will provide valuable information for understanding how best to promote healthy living among older Australians.

Although the older women of Women's Health Australia grew up at a time when physical activity was not expected of women in their 70s, empirical evidence suggests that the maintenance of moderate physical activity throughout the lifespan is associated with a range of positive health outcomes in older age. Significantly these include positive psychological impacts, which in older age may help the individual to cope with physical limitations. A longitudinal analysis of physical activity, its adoption, maintenance and cessation, among the older women (aged 70-75 at Survey 1, and 73-78 at Survey 2) was conducted by Christina Lee and Anne Russell.

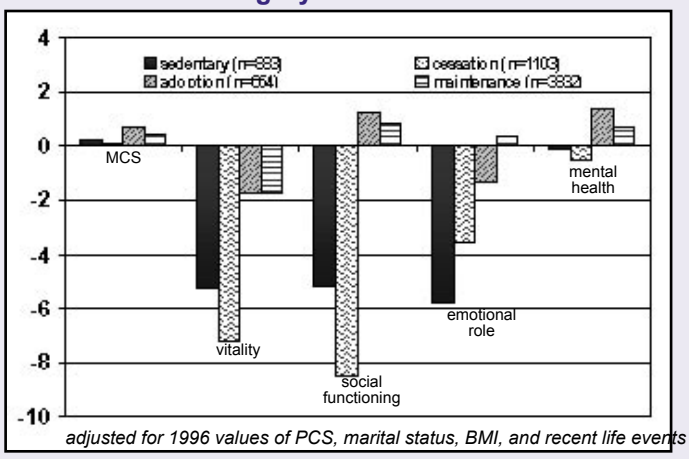
As expected, cross-sectional analysis showed that the more physically active women scored better on all the mental health subscales of the SF-36 than did the less active women. Clearly, however, cross-sectional relationships do not allow one to distinguish cause and effect. Perhaps physical activity causes improvements in mental health, perhaps women in good mental health have the energy to get up and go out exercising, or perhaps some other factors such as physical health or social circumstances cause both.

With the longitudinal analyses, it is possible to account for differences that may be relevant. These include physical well-being and major illness; marital status; major life events; and body mass index. Once these were taken into account, women who maintained a pattern of physical activity or who increased their level of activity between the surveys showed increases in mental health, while those who stopped or reduced physical activity showed decreases. This provides strong evidence that promoting physical activity among older Australians may be a valuable strategy for helping them to maintain good emotional health.

Reference

Lee C & Russell A. Effects of physical activity on emotional well-being among older Australian women: cross-sectional and longitudinal analyses. *Journal of Psychosomatic Research*, in press.

Mental health change by physical activity change category - older cohort.



adjusted for 1996 values of PCS, marital status, BMI, and recent life events

Selected Projects in Progress 2002

PhD Candidate
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Supervisors
Professor Wendy Brown & Dr Anne Young

Funding Source
ResearchManagement Committee, University of Newcastle

Completion date
December 2002

Factors influencing weight change in mid-aged women

This study addresses the question of why women tend to gain weight in mid-life (45-55 years) through analysis of the main WHA survey results and a nested cohort study of weight change in menopausal women. The analysis of the mid-aged WHA cohort showed that women who progressed through menopause (pre to post) in a two year period experienced higher mean weight gain (1.5kg) than those who remained pre-menopausal (0.9kg). Although this was the mean result, it is important to note that not all women experienced weight gain with the menopause transition. The nested cohort study aimed to investigate why some women undergoing menopause gained weight, while others avoided weight gain. Of the 875 women surveyed, 326 women gained clinically significant amounts of weight (≥ 2.25kg) over a two year period, while 483 lost weight or remained the same. There were no significant differences in the weight of these women at birth, age 18 or age 25. Weight-gainers and non-gainers both commenced adulthood at a mean of 54kg and had gained a mean of 12kg by Survey 1 in 1996 (age 45-50). By the nested cohort survey in 1999 the weight-gainers were another seven kilos heavier while the non-gainers were one kilo lighter. Weight-gainers were thus 19 kilograms heavier on average by mid-age than they had been in early adulthood. The measure of waist circumference was significantly higher for

weight-gainers (95 ±13.3 cm) than non-gainers (90 ± 13.2 cm), suggesting that weight differences affected abdominal adiposity.

Despite being at similar stages of the menopause transition, the weight-gainers reported experiencing the vasodilatory symptoms of hot flushes and night sweats more frequently than non-gainers. There were no statistically significant differences between weight-gainers and non-gainers for energy intake or physical activity. However, the weight-gainers scored significantly higher on measures of emotional eating. In terms of attitudes, weight-gainers more often reported that tiredness and lack of interest had caused a decrease in physical activity, and that emotional eating, craving sweet foods, and drinking alcohol had increased their energy intake. These and other findings from the sub-study have the potential to inform programs for preventing weight gain in mid-life.

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WHA Collaborators
Associate Professor Margot Schofield & Professor Christina Lee

Funding Source
AustralianPostgraduate Award, University of New England

Completion Date
February 2003

Women's experiences of domestic abuse in rural and remote Australia

The goal of this work is to investigate the experiences of women who have lived in an abusive relationship in rural and remote regions, their experiences of help seeking, their fears around confidentiality, and their experiences of leaving an abusive relationship.

The transcripts of qualitative interviews conducted with a subsample of the mid-aged cohort during 2001 were examined for themes and issues relevant to country women who had experienced domestic abuse.

Women from rural and remote areas who experienced domestic abuse tended to be isolated, and faced a higher risk of being threatened with a firearm, compared with urban women. Help seeking was inhibited by isolation, distance, fears about confidentiality, social relationships between the perpetrator and help providers, poor rapport with doctors, previous adverse responses, and a fear of not being believed. Help seeking was enhanced when help providers could engender trust, which included assurances of confidentiality, a non-judgmental attitude, and being a 'stranger' to the area. In the short term, leaving an abusive relationship was found to involve moving house, leaving the local community, finding work, replacing possessions that were left behind, financial hardship, and loss of friendships.

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Supervisors
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Funding Source
Melbourne Research Scholarship, the Victorian component of data collection is supported by the Helen Macpherson Smith Trust.

Completion Date
October 2003

Childlessness and the role of choice in childless women's reproductive outcome

This project aims to investigate childlessness amongst Australian women. While we know little about this phenomenon, it is a matter of significant public interest because Australia's fertility rate has been declining since the early 1970s both because of women having fewer children and more women remaining childless. This research

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WHA Collaborator
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Funding Source
AustralianPostgraduate Award, Flinders University of South Australia

Completion Date
May 2004

Psychosocial risk factors for pregnancy, childbirth, and pregnancy risk-taking in late-adolescent females: evidence from Women's Health Australia.

This research aims to identify psychosocial risk factors of late-adolescent pregnancy, childbirth and pregnancy risk taking. To achieve this aim the project has two stages.

***Study 1*:** Existing WHA data from Surveys 1 and 2 of the young cohort (conducted in 1996 and 2000) were analysed. The relationship between reproductive behaviour and socio-demographic, psychosocial well-being, and aspirational factors was assessed in a sample of 1,647 late-adolescent women. Cross-sectional findings indicated that lower psychosocial maturity correlated with both late-adolescent pregnancy and birth, and problem behaviour was associated with late-adolescent pregnancy. Low educational involvement combined with low status employment was also associated with late-adolescent childbirth. Longitudinally, poorer psychosocial well-being and high aspirations to have a family combined with low job aspirations were associated with both late-adolescent pregnancy and childbirth. Stress and alcohol use were additional risk factors for pregnancy, and unemployment combined with lower income was another risk factor for early childbirth. These findings provided some support for the Eriksonian developmental model of adolescent pregnancy and childbirth, in that psychosocial well-being partially mediated the relationship between unemployment/income and subsequent late-adolescent childbirth. It was concluded that psychosocial factors play an important role in the understanding of late-adolescent pregnancy and childbirth.

Study 2: This study aims to identify psychosocial risk factors of late-adolescent pregnancy risk-taking. A contraceptive use questionnaire measuring pregnancy risk-taking (defined as inconsistent and non-optimal use of contraception), was designed and pilot tested with the WHA pilot group. Following this, the questionnaire was sent to 120 of the youngest late-adolescent women from the WHA young cohort. Currently 87 (72.5%) have been returned. Pre-existing information on their psychosocial status will be used to identify possible risk factors and protective factors for pregnancy risk-taking in these young women.

The findings from these studies will be used to inform future Australian research and to provide recommendations for efforts to prevent adolescent pregnancy.

Comparison of non-heterosexual and heterosexual women in Young Survey 2

The purpose of this analysis is to compare and contrast the health status, risk factors and health service use of non-heterosexual young women with heterosexual.

The initial focus has been in 3 areas: drug use; mental health; and health service use.

We used data from the second survey of 9,683 young women, who were aged 22-27 when contacted in 2000. Our focus is on the 9,260 women who provided information about their sexual identity. Overall, 91.4% were exclusively heterosexual, and 8.6% were not exclusively heterosexual (1.0% were predominantly or exclusively homosexual.) This distribution is similar to other surveys of representative samples.

Data were weighted to correct for over-sampling in non-metropolitan areas. Analyses which distinguished between heterosexual, bisexual, and lesbian women revealed minimal differences between bisexual and lesbian women, so these groups have been combined for the main analyses. Odds ratios were adjusted for three confounding variables: age, father's occupation, and region of residence.

Significant differences have been found between the two groups of women on all outcome measures. Of particular interest are the following.

- *Drug use:* Lifetime and last-year measures of the use of licit and illicit drugs were significantly higher in bisexual/lesbian women. Bisexual/lesbian women were also more likely to have injected drugs.
- *Mental health*: Bisexual/lesbian women had poorer mental health, significantly higher levels of depression, anxiety disorder and self-harm/suicidal behaviour. Potential confounders were social support, stress levels and experiences of all forms of abuse. Bisexual and lesbian women were more likely to report abuse and had lower levels of social support than exclusively heterosexual women. However, even after adjusting for abuse and social support bisexual/lesbian women remain at higher risk of depression, anxiety and self-reported harm.
- *Health service use*: Bisexual/lesbian women use more health services. Further detail will follow in the next report.

Collaborators
Dr Ruth McNair (University of Melbourne), Professor Marian Pitts, Dr Lynne Hillier, Dr Anne Kavanagh, Mr Richard de Visser, Ms Philomena Horsley, Ms Anne Mitchell & Ms Bin Tong (Australian Research Centre in Sex, Health and Society, La Trobe University)

WHA Collaborator
Professor Christina Lee

Funding Source
Women's Health Victoria & Department of Human Services, Tasmania

Completed Research Thesis 2002

Student
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BSc(Hons), PhD
School of Population Health, University of Queensland

Degree
MPH

Supervisors
Professor Annette Dobson & Ms Anne Russell

The contraceptive behaviour of young women in Australia

Aim

To determine the socio-demographic factors and health related behaviours associated with two aspects of contraceptive behaviour: contraceptive use and contraceptive type used among young women in Australia.

Methods

The study sample comprised 14,779 women aged 18 to 23 years who participated in the 1996 baseline survey of the Women's Health Australia project. Of these, 9,683 women completed the second survey in 2000 when they were aged 22 to 27 years. Measures of contraceptive use and contraceptive type were derived from a number of questions on contraception in both surveys. Associations between contraceptive behaviour and socio-demographic factors and health-related behaviours were examined by multinomial logistic regression.

Results

72% of young women reported using contraception in 1996 and 77% in 2000. The oral contraceptive pill was the preferred method with 70% in 1996 and 73% in 2000 of young women being users, including almost one fifth of these women who used the pill in combination with other methods, including the condom. Between one in four (1996) and one in five (2000) women used condoms with or without other methods (but not the pill). Women who used methods other than the pill or condoms accounted for only about 5% of the sample.

Compared with women who only used the pill, women who used the pill in combination with condoms and other methods (not specified) were more likely to be: never married; older; drinkers; smokers; and to have had a termination or miscarriage. Women who used condoms in combination with other methods (but not the pill) were more likely than women who only used the pill for contraception to be: never married; younger; born in non-English speaking countries; described their work status as 'home duties'; drinkers; smokers; past users of illicit drugs; obese; and to have had a termination or miscarriage. Women who used other methods for contraception were more likely to be: older; living with children; born in non-English speaking countries; in an unskilled

occupation; non-drinkers; smokers; and to have had a termination or miscarriage compared to women who used the pill alone.

Women born in non-English speaking countries were more likely to report not needing contraception or to be pregnant than women who used contraception. Women who were pregnant or trying to become pregnant were more likely to be married or in de facto relationships than women who used contraception. At the time of the second survey one in five women had given birth to at least one child and one in ten women had had a termination.

Conclusion

Most young Australian women use contraception. The pill is the preferred method with considerable use of dual methods (ie. pill and other methods). Despite the widespread use of contraception, about 10% of women have experienced a termination which indicates a large number of unplanned pregnancies. Strategies to improve contraceptive protection could include: more choice of effective methods; education about and provision of emergency contraception; and improved compliance with currently used methods.

Publications 2002

The following abstracts of papers can be found on our webpage under the publication section. The address is http://www.newcastle.edu.au/centre/wha

Brown WJ & Miller YD. Too wet to exercise? Leaking urine as a barrier to physical activity in women. *Sports Medicine,* 2002; 4: 373-378.

Leaking urine is frequently mentioned (anecdotally) by women as a barrier to physical activity. The aim of this paper was to use results from the Australian Longitudinal Study on Women's Health (ALSWH) to explore the prevalence of leaking urine in Australian women, and to ascertain whether leaking urine might be a barrier to participation for women.

More than 41,000 women participated in the baseline surveys of the ALSWH in 1996. More than one third of the mid-age (45-50 years) and older (70-75) women and 13% of the young women (18-22) reported leaking urine. There was a cross-sectional association between leaking urine and physical activity, such that women with more frequent urinary leakage were also more likely to report low levels of physical activity. Leaking urine was more prevalent in women with children, and in women with BMI>25 $kg.m^{-2}$.

More than one thousand of those who reported leaking urine at baseline participated in a follow-up study in 1999. Of these, more than 40% of the mid-age women (who were aged 48-53 in 1999), and one in seven of the younger (21-26 years) and older (73-79 years) women reported leaking urine during sport or exercise. More than one third of the mid-age women and more than one quarter of the older women, but only 7% of the younger women said they avoided sporting activities because of leaking urine.

The data are highly suggestive that leaking urine may be a barrier to physical activity, especially among mid-age women. As current estimates suggest that fewer than half of all Australian women are adequately active for health benefit, health professionals could be more proactive in raising this issue with women and offering help through non-invasive strategies such as pelvic floor muscle exercises.

Schofield MJ, Reynolds R, Mishra GD, Powers JR & Dobson AJ. Screening for vulnerability to abuse among older women: Women's Health Australia study. *Journal of Applied Gerontology*, 2002; 21: 24-39.

The validity of a brief self-report screening measure for elder abuse was examined on a nationally representative sample of more than 12,000 older women, in the baseline survey of the Australian Longitudinal Study on Women's Health. The screening instrument was a modification of the Hwalek-Sengstock Elder Abuse Screening Test. Construct validity was examined using factor analysis and correlation with a wide range of socio-demographic, psychological and health related variables. Four factors, each of three items, were identified representing the following domains: Vulnerability, Dependence, Dejection and Coercion. The Vulnerability and Coercion factors had the highest face validity for abuse and demonstrated moderate to good construct validity. The six items comprising these factors may provide a simple screening tool for elder abuse. The identified correlates of abuse indicators have the potential to enhance policy development, screening, intervention and carer support programs.

Patterson AJ, Young AF, Powers JR, Brown WJ & Byles JE. Relationships between nutrition screening checklists and the health and well being of older Australian women. *Public Health Nutrition,* 2002; 5: 65-71.

Objectives*:* To examine associations between nutrition screening checklists and the health of older women.

Methods*:* The Australian Nutrition Screening Initiative (ANSI), adapted from the Nutrition Screening Initiative (NSI), was completed by 12,939 women aged 70-75 years as part of the Australian Longitudinal Study on Women's Health. Responses to individual items in the checklist, and ANSI and NSI scores, were compared with measures of health and health service utilization. The performance of an unweighted score (TSI) was also examined.

Results*:* Women with high ANSI, NSI and TSI scores had poorer physical and mental health, higher health care utilization and were less likely to be in the acceptable weight range. Whereas ANSI classified 30% of the women as 'high risk', only 13% and 12% were classified as 'high risk' by the NSI and TSI respectively.

Conclusions: Higher scores on both the ANSI and NSI are associated with poorer health. The simpler unweighted method of scoring the ANSI (TSI) showed better discrimination for the identification of 'at risk' women than the weighted ANSI method. The predictive value of individual items and the checklist scores need to be examined longitudin

Mishra GD, Ball K, Dobson AJ, Byles JE & Warner-Smith P. Which aspects of socioeconomic status are related to health in mid-aged and older women? *International Journal of Behavioral Medicine*, 2002; 9: 263-285.

A population-based study was conducted to validate gender- and age-specific indices of socioeconomic status (SES) and to investigate the associations between these indices and a range of health outcomes in two age cohorts of women. Data from 11,637 women aged 45-50 and 9,510 women aged 70-75 were analysed. Confirmatory factor analysis produced four domains among the mid-aged cohort (employment, family unit, education and migration) and four domains among the older cohort (family unit, income, education and migration). Overall the results supported the factor structures derived from another population based study (Australian National Health Survey 95), reinforcing the argument that SES domains differs across age groups. In general, the findings also supported the hypothesis that the SES domains would be associated with physical and mental health for mid-aged women but not for older women. The main exception was that in the older cohort, the education domain was significantly associated with all specific health measures.

Warner-Smith P & Brown P. 'The town dictates what I do': the leisure, health and wellbeing of women in a small country town. *Leisure Studies*, 2002; 21: 39-56.

The contribution of leis

s well documented. It

is also clear that patterns of leisure activity are differentiated by gender and regional differences, as well as those of age, class and ethnicity. This paper explores the leisure and wellbeing of mid aged rural women in a small Australian country town in the late 1990's, focusing on issues which have been identified as being significant for women in isolated areas. These include poor job opportunities, a lack of public transport and other facilities, community designs that isolate women in their homes, family transience, and the politics of being "different" in a small community. Data are drawn from focus group interviews, augmented with observation, and the study is contextualised in findings from the Women's Health Australia longitudinal study.

Lee C & Powers JR. Number of social roles, health and well-being in three generations of Australian women. *International Journal of Behavioral Medicine*, 2002; 9: 195-215.

The relationship between multiple social roles and health is a particular issue for women, who continue to take major responsibility for childcare and domestic labour despite increasing levels of involvement in the paid workforce. This paper analyzes Survey 1 data from the Australian Longitudinal Survey on Women's Health to explore relationships between role occupancy and health, well-being and health service use in three generations of Australian women. A total of 41,818 women in three age groups (young, 18-23; mid-age, 40-45; older, 70-75) responded to mailed surveys. Young and mid-age women were classified according to their occupancy of five roles – paid worker, partner, mother, student and family caregiver – while older women were classified according to occupancy of partner and caregiver roles only. Common symptoms (headaches, tiredness, back pain, difficulty sleeping), diagnosis of chronic illness, use of health services, perceived stress, and the physical and mental component scores of the SF-36 were compared across groups characterized by number of roles. Among young women, the best health was associated with occupancy of one role; among mid-age women, those with three or more roles were in the best health; and for older women, those with one role were in the best health. Young women with none or with four or more roles, and mid-age and older women with none of the defined social roles, tended to be in the poorest health. The patterns of results may be explained by differences in the extent to which women at different life stages feel committed to various social roles, and to the extent to which they are able to draw on social, material and economic supports.

Lee C & Porteous J. Experiences of family caregiving among middle-aged Australian women. *Feminism and Psychology*, 2002; 12: 79-96.

Family caregiving is an unpaid activity which falls inequitably on women. As one component of the Women's Health Australia survey, this paper uses quantitative and qualitative methods to examine the impact of family caregiving in a sample of 13,888 women aged 45 to 50, of whom 12.8% (N=1,775) responded to specific items about caring for a frail, ill or disabled family member and 185 made open-ended comments about their experiences. Quantitative analyses showed that caregivers were less likely to be employed full-time and more likely to have financial difficulties. Caregivers rated their health lower than did non-caregivers, reported more physical symptoms,

Feldman S, Byles J, Mishra G & Powers J. The health and social needs of recently widowed older women in Australia. *Australasian Journal on Ageing*, 2002; 21: 135-140.

and scored lower on both the physical and the mental components of the SF-36. They also reported higher levels of stress and perceived pressure, were more likely to have been admitted to hospital in the previous year, to be taking medication for "nerves", and more likely to smoke, though less likely to drink alcohol. The qualitative analysis supported these findings, and in addition identified several new themes including difficulties with travel; inadequacies in health and welfare systems; a sense of exploitation; and fear for the future. These findings support the view that interventions to assist family caregivers must address systemic in addition to individual factors.

Parker G & Lee C. Predictors of physical and emotional health in a sample of abused Australian women. *Journal of Interpersonal Violence*, 2002; 17: 987-1001.

Objective: To identify women's health and social needs immediately following the death of their husband.

Method: Follow-up survey of 430 widowed women participating in the Australian Longitudinal Study on Women's Health.

Results: Surveys were returned by 340 women (79%) and 231 of these women had been widowed three years or less. While 81% of the 231 women still lived in their own homes, 19% had moved house since being widowed for financial or social reasons. There were prevalent needs for legal services (44%), and home maintenance (55%). Assistance from medical practitioners included understanding (54%), support (32%) and information (20%). Thirty percent said they had received medication to assist their bereavement, and 30% had taken medication to help them sleep or "for their nerves" within the four weeks prior to survey. Most women (85%) felt they had maintained or increased their level of social contact since becoming widowed.

Conclusion: Widowed women have broad needs for practical help and advice.

Appropriate services for widowed women need to encompass the social context in which widowed women are attempting to reconstruct their lives.

Brown WJ, Mishra GD & Dobson AJ. Changes in physical symptoms during the menopause transition. *International Journal of Behavioral Medicine*, 2002; 9: 53-67.

This study investigated the extent to which aspects of abuse and of help-seeking were associated with the physical and emotional outcomes of women's experiences of violence and abuse. A total of 1159 women aged 48 to 53, from the mid-age cohort of the Women's Health Australia longitudinal project, completed self-report questionnaires. All had reported having experienced abuse and had indicated their willingness to participate in surveys on the topic. Measures included descriptors of the abuse, SF-36 physical and mental health summary scores, GHQ-12, and the CES-D depression scale. Poorer physical and mental health, psychological distress, depression, and subjective perception of negative effects were predicted by abuse having been frequent, having continued over time, and having occurred in adulthood but not having occurred recently. Having discussed the situation with a psychiatrist or doctor, and having wanted to leave a situation but not being able, were also significant predictors of poorer outcomes. However, characteristics of the abuse and of help-

seeking accounted for less than 20% of the variance in outcome measures. Further research should concentrate on personal characteristics of the women and on coping strategies which are predictive of positive outcomes, in order to develop strategies which can help women to survive abusive experiences.

Young A. Putting data into context: findings from linking Medicare health service use and expenditure data with longitudinal health survey data. *Proceedings from Symposium on health data linkage: its value for Australian health policy development and policy relevant research*. pp. 1-20. Adelaide: Public Health Information Development Unit, 2002.

This paper analyses physical symptoms experienced by mid-age Australian women in different stages of the menopause transition. A total of 8,623 women, aged 45 to 50 years in 1996, who participated the mid-age cohort of the Australian Longitudinal Study on Women's Health, completed Survey 1 in 1996 and Survey 2 in 1998. Women were assigned to one of six menopause groups according to their menopausal status at Surveys 1 and 2, and compared on symptoms experienced at Surveys 1 and 2, adjusted for lifestyle, behavioural and demographic factors. At Survey 1, the most commonly reported symptoms were headaches, back pain, stiff joints, tiredness and difficulty sleeping. Peri-menopausal women were more likely than pre-menopausal or post-menopausal women to report these symptoms. Hot flushes and night sweats were more common among post-menopausal women. Compared with those who remained pre-menopausal, women who were in the early stages of menopause or peri-menopausal were more likely to report tiredness, stiff joints, difficulty sleeping and hot flushes at Survey 2. Women who remained peri-menopausal were also more likely

to report back pain and leaking urine. Compared with pre-menopausal women, odds ratios for night sweats increased for women in consecutive stages of the menopause transition and remained high in the post-menopausal women.

Introduction: The Australian Longitudinal Study on Women's Health (ALSWH), funded by the Commonwealth Department of Health and Ageing, is a study of the health and well being of three large cohorts of Australian women. The ALSWH has made extensive use of linked survey and Medicare/Department of Veterans' Affairs data. Results are presented to illustrate the value of the linked data for informing policy makers about provision of health services and for monitoring compliance with best practice guidelines.

Methods: The project recruited three large, nationally representative cohorts of women, aged 18-23 years (n=14,228), 45-50 years (n=13,338) and 70-75 years (n=12,317) in 1996. Self-administered postal surveys are completed every three years and include a wide range of measures of demographic, social and health-related factors. Almost 23,000 of the women have given written consent for the release of their individual records from the Health Insurance Commission. Data relating to more than 1.5 million Medicare/DVA services provided to these women during 1995-1999 have been linked to the first two phases of their survey data. Changes in health, health service use and the costs of services were examined according to age, urban/rural residence and socioeconomic status. Analysis of the linked data for subgroups of women, such as frequent attenders to general practice, and the use of best practice guidelines for diabetes care were also examined.

Results: For all age groups, women with lower socioeconomic status tended to have lower out of pocket costs for general practice visits. However, women in rural and remote areas reported poorer access to doctors who bulk bill and Medicare data showed these women had higher out of pocket costs than women living in urban areas. Many of the very frequent attenders to general practice had suffered a major personal illness, and the survey data showed that many also had very difficult personal and social circumstances. Women with diabetes, and those who developed diabetes, reported poorer health and greater use of health services and medications than women without diabetes. Medicare data helped to quantify the increased health service use and expenditure over time (for services outside hospital) for these women. However their Medicare data also showed that compliance with best practice guidelines for diabetes care, such as monitoring HbA1c, was sub-optimal.

Conclusions: The linked data provide information on medical conditions and social circumstances which are valuable for understanding health service use. Inequalities in

Hussain R, Schofield M & Loxton D. Cosmetic surgery history and health service use in midlife: Women's Health Australia. *Medical Journal of Australia,* 2002; 176: 576-579.

Schofield M, Hussain R, Loxton D & Miller Z. Psychosocial and health behavioural covariates of cosmetic surgery: Women's Health Australia study. *Journal of Health Psychology*; 2002; 7: 445-457.

Bell S & Lee C. Development of the perceived stress questionnaire for young women. *Psychology, Health and Medicine*, 2002; 7: 189-201.

the provision and costs of health care services were identified. The linked data can be used to monitor compliance with best practice guidelines for care and to determine the impact of strategies designed to improve the health and well being of women.

Objective: To explore among middle-aged women, the relationship between having ever had cosmetic surgery and the frequency of use of other health services.

Design: Retrospective analysis of cross-sectional survey data from the Women's Health Australia (WHA) study.

Setting and participants: A nationally representative sample of the "mid-aged" (45-50 years) cohort of women who participated in the 1996 WHA baseline postal survey. Responses were received from 14 100 women (a response rate of 54%).

Results: Seven percent of women reported ever having had cosmetic surgery. After adjusting for demographic variables, multivariate analysis confirmed that women who had cosmetic surgery were significantly more likely to use heath services more frequently (eg, surgical procedures, consult with specialists and alternative health care providers). Cosmetic surgery was also mber of chronic illnesses and use of medication for anxiety

Conclusion: Further research ether cosmetic surgery is directly related to health cond ychosocial variables. Such research should examine wh ns may be more cost-effective in dealing with the issues that cosmetic surgery.

Ball K & Kenardy J. Body weight, body image and eating behaviours: relationship with ethnicity and acculturation in a community sample of young Australian women. *Eating Behaviors*, 2002; 3: 205-216.

Current psychosocial and he of past cosmetic surgery was assessed in a populatio aged 45-49 years, from the baseline survey of the W y. Seven percent (n=978) reported having ever had cosmetic surgery. Multivariate analysis found that self-reported dieting frequency in the past year and body mass index were highly significant covariates of cosmetic surgery; perception about body weight was moderately significant, and satisfaction with body weight was unrelated. A higher likelihood of cosmetic surgery was also found for women who had ever been in a violent relationship, who had been verbally abused recently, smokers, those taking medication for sleep or nerves, and those with private hospital insurance. There were moderate associations between cosmetic surgery and state of residence, higher occupational status, alcohol use, higher stress, and poorer mental health. Life satisfaction, social support, recent life events, physical health, area of residence, country of birth, and marital status, though all significant at the univariate level, were unrelated in multivariate analyses. The psychological and health implications of the findings are discussed.

The Perceived Stress Questionnaire for Young Women (PSQYW) was developed for the Women's Health Australia (WHA) project as a measure of the level and perceived sources of stress. A total of 14,779 women aged 18-23 completed the baseline

survey. The PSQYW scale was shown to be internally reliable, unifactorial, and to have content validity. Convergent construct validity was demonstrated most strongly with measures of mental health, life events and symptoms, and more weakly with the health behaviours of smoking and alcohol bingeing. There was no relationship with physical activity. Multiple regression showed that illness, physical health, mental health and life events explained 44% of the variance, with mental health explaining the most. Construct validity for the life domains indicated 5 factors relating to family of origin, relationships with others, own health, work/money and study. The PSQYW was proposed to be an adequate measure of overall perceived stress and to be able to indicate broad life domain perceived stress sources for young women. Further research with broader demographic samples is proposed to enable the PSQYW to be used as a succinct method of assessing perceived stress levels and sources by GPs, and other health practitioners.

Ball K, Brown W & Crawford D. Who does not gain weight? Prevalence and predictors of weight maintenance in young women. *International Journal of Obesity*, in press.

A study was conducted to investigate associations between ethnicity and acculturation status, and risk factors for eating disorders among young adult women. A community sample of 14,779 women aged 18-23 completed a comprehensive mail-out survey which incorporated questions on country of birth, length of time spent in Australia, body weight, weight dissatisfaction, dieting, binge eating and compensatory disordered eating behaviours. Results showed that risk factors for eating disorders were present across a range of ethnic groups. Further, a strong acculturation effect was observed, such that the longer the time spent in Australia, the more women reported weight-related values and behaviours similar to those of Australian-born women. Results challenge claims that risk factors for disordered eating are restricted to Caucasian females in Western societies. Implications for understanding ethnic and sociocultural influences on body weight, dieting and disordered eating are considered.

Mishra GD, Brown WJ & Dobson AJ. Physical and mental health: changes during menopause transition. *Quality of Life Research*, in press.

Objective: To investigate the prevalence and predictors of weight maintenance over time in a large sample of young Australian women.

Design: This population study examined baseline and 4-year follow-up data from the cohort of young women participating in the Australian Longitudinal Study on Women's Health.

Subjects: A total of 8,726 young women aged 18-23 years at baseline.

Schofield MJ & Mishra GD. Validity of self-report screening scale for elder abuse: Women's Health Australia study. *The Gerontologist*, in press.

Measures: Height, weight and body mass index (BMI); physical activity; time spent sitting; selected eating behaviours (eg dieting, disordered eating, takeaway food consumption); cigarette smoking, alcohol consumption; parity; and sociodemographic characteristics.

Results: Only 39% of the women reported their BMI at follow-up to be within 5% of their baseline BMI (maintainers); 36% had gained weight and 14% had lost weight. Weight maintainers were more likely to be in managerial or professional occupations; to have never married; to be currently studying; and to not be mothers. Controlling for sociodemographic factors, weight maintainers were more likely to be in a healthy weight range at baseline; and to report that they spent less time sitting, and consumed less takeaway food, than women who gained weight.

Conclusions: Fewer than half the young women in this community sample maintained their weight over this four-year period in their early twenties. Findings of widespread weight gain, particularly among those already overweight, suggest that early adulthood, which is a time of significant life changes for many women, may be an important time for implementing strategies to promote maintenance of healthy weight. Strategies which encourage decreased sitting time and less take-away food consumption may be effective for encouraging weight maintenance at this life stage.

Powers JR, Young AF, Russell A & Pachana NA. Implications of non-response of older women to a short form of the Center for Epidemiologic Studies Depression Scale. *International Journal of Aging and Human Development*, in press.

Objective: To measure changes in physical and mental health in six groups of women defined by menopausal status or use of hormone replacement therapy.

Design*:* Longitudinal study with two years follow-up.

Participants*:* 8623 women participating in the Australian Longitudinal Study on Women's Health, aged 45-50 years in 1996.

Main outcome measures*:* Changes in the eight dimensions of the Short Form General Health Survey (SF-36) adjusted for baseline scores, lifestyle, behavioural and demographic factors.

Results*:* At baseline, mean scores for all dimensions of the SF-36 were highest in pre-menopausal women. There were declines in the SF-36 dimensions in all six groups of women. Declines were largest in physical functioning (adjusted mean change of -4.9, 95% confidence interval -6.2 to -3.5) and physical role limitation (-5.7, 95% CI -8.2 to -3.2) in women who remained peri-menopausal throughout the study period and in women taking hormone replacement therapy at the time of either survey; physical functioning: -5.3 (-6.7 to -3.9), role physical limitation: -7.5 (-9.9 to -5.1). They were smallest in women who remained pre-menopausal; physical functioning: -3.2 (-4.4 to -2.0); role physical limitation: -2.1 (-4.3 to 0.1).

Conclusions*:* Physical aspects of general health and well-being decline during the menopausal transition. Sensitive measures and careful analysis are needed to understand why these changes are worse for peri-menopausal women and those taking hormone replacement therapy.

Strodl E, Kenardy J & Aroney C. Perceived stress as a predictor of the self-reported new diagnosis of symptomatic CHD in older women. *International Journal of Behavioral Medicine,* in press.

Purpose of the study**:** Early identification of elder abuse requires a valid, easily administered screening instrument. This study examined the reliability and validity of the 'Vulnerability to Abuse' Screening Scale (VASS), a 12-item self-report measure with four factors (vulnerability, dependence, dejection, coercion).

Design and methods**:** The sample comprised 10,421 nationally representative Women's Health Australia study participants who completed Time 2 postal survey in 1999, aged 73-78. We tested validity of the VASS factor structure and whether

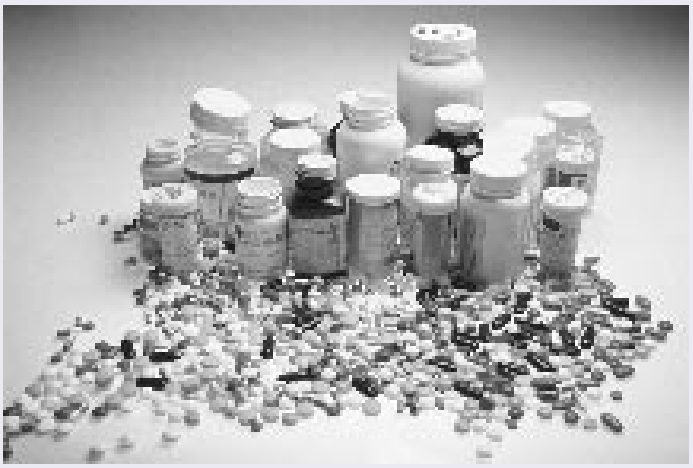
baseline risk status independently predicted Time 2 attrition.

Results**:** Findings confirmed the VASS factor structure and construct validity. Four factors explained 51% of variance, and factors were internally consistent. The vulnerability and coercion factors held the strongest face and construct validity for physical and psychological abuse. The dependence and dejection factors were valid, reliable and significantly predicted three year attrition after controlling for confounders.

Implications**:** Further work is needed to determine sensitivity and specificity of VASS as a screening instrument for elder abuse. Qualitative research could examine specific experiences and contexts of vulnerable women.

Byles JE, Mishra GD, Harris MA & Nair K. The problems of sleep for older women: changes in health outcomes. *Age and Aging*, in press.

The Center for Epidemiologic Studies Depression Scale (CES-D) is frequently used in epidemiological surveys to screen for depression, especially among older adults. The present article addresses the problem of non-completion of a short form of the CES-D (CESD-10) in a mailed survey of women aged 73 to 78 years enrolled in the Australian Longitudinal Study on Women's Health. Non-completion of the CESD-10 was significantly higher for older women than for mid-age (47-52 years) and young (22-27 years) women. Among the older participants, completers of the CESD-10 had higher levels of education, found it easier to manage on available income and had better physical and mental health. Non-completers of the CESD-10 had SF-36 scores that were intermediate between those for women classified as depressed and as non-depressed using the CESD-10. Although levels of self-reported depression and other indicators of depression were slightly higher among non-completers than completers, the levels varied with the number of missing CESD-10 items. To avoid problems of missing data, especially in mailed surveys to older populations, instructions for the CESD-10 should emphasise the need to complete all items. CESD-10 items may need to be spread throughout the survey to minimise their negative impact.



Warner-Smith P, Mishra G & Brown P. Women's wellbeing and their satisfaction with hours of paid work. *Health Sociology Review*, in press.

This article describes one aspect of a prospective cohort study of 10 432 women aged between 70 to 75 years of age. After a three-year period, 503 women reported a new diagnosed of angina or myocardial infarction (symptomatic coronary heart disease [CHD]). Time one psychosocial variables (Duke Social Support Index, time pressure, Perceived Stress Scale, the Mental Health Index, having a partner, educational attainment, and location of residence) were analysed using univariate binary logistic regression for their ability to predict subsequent symptomatic CHD. Of these variables, the Duke Social Support Index, Perceived Stress Scale and the Mental Health Index all proved to be significant predictors of symptomatic CHD diagnosis. Only the Perceived Stress Scale, however, proved to be a significant independent predictor. After controlling for time one non-psychosocial variables, as well as the frequency of family doctor visits, Perceived Stress remained a significant predictor of the first time diagnosis of symptomatic CHD in this cohort of older women.

Objective: To identify the persistence of sleeping difficulty and medication use in a cohort of older Australian women from baseline to three year follow-up and to explore the relationship between these factors and health-related quality of life scores, falls and other health care use.

Method: A three-year longitudinal survey of Australian 10,430 women aged 70–75 years at baseline. These women were participants in the Australian Longitudinal Study on Women's Health (ALSWH) randomly selected from the Australian Medicare database.

Results: A majority of women (63%) endorsed one or more items related to sleeping difficulty at three year follow-up: 33% reported one item only, 16% reported 2 or 3 items, and 14% reported more than 3 items; (42.4%) reporting “waking in the early hours”, 2592 (26.0%) “taking a long time to get to sleep”, 2078 (21.0%) “sleeping badly at night”, 1072 (10.84) “lying awake most of the night” and 1087 (11.0%) “worry keeping you awake”. Total scores on the Nottingham Health Profile sleep sub-scale ranged from 0-100 and were skewed to the right. The median score was 12.57. There was a strong statistical association between reporting sleeping difficulty at baseline and at follow-up. A total of 1532 (15%) women reported use of sleeping medication at follow-up and women were 6.5 times more likely to report use if they also reported any item of sleep difficulty. There was a moderate level of agreement (88%, Kappa = 0.56) between taking sleeping medication within 4 weeks before the baseline survey and within four weeks before follow-up. On multivariate analysis, sleeping difficulty at baseline was negatively associated with general health perceptions, emotional role limitations and general mental health sub-scales of the Short-Form – 36 Health Survey (SF-36) at follow-up; the use of sleep medication at baseline was negatively associated physical functioning, bodily pain, vitality, social functioning and general mental health SF-36 sub-scale scores. The use of sleep medication was also significantly associated with falls, accidents, and health care utilisation.

Conclusion: Sleeping difficulty is a common and persistent complaint among older women and is strongly associated with use of sleeping medications. Both behaviours are negatively associated with health status.

Miller YD, Brown WJ, Smith N & Chiarelli P. Managing urinary incontinence across the lifespan. *International Journal of Behavioral Medicine*, in press.

While the labour force participation of women in post-industrial western societies is increasing, study after study shows that women still take major responsibility for family work, whatever their employment commitments. However, it has also been shown that employment is associated with better health and well-being for women. In regard to optimal integration of work, wellbeing and family life, there is therefore a need for more fine-grained research which looks at the specifics of women’s health and their patterns of time use.

This paper reports on associations between satisfaction with hours of paid work and the physical and mental health of mid age women. Data are drawn from the Australian Longitudinal Study on Women’s Health (now known as the Women’s Health Australia [WHA] project) which is a 20 year survey of the health of over 40,000 Australian women in three age cohorts. At the baseline survey in 1996 the cohorts were aged 18-23 (‘young’), 45-50 (‘mid age’) and 70-75 (‘older’).

Mid age women who were happy with their hours of paid work were most likely to be working part-time between 16 and 24 hours per week. They were followed by those who were working ‘long part-time’ of 25 to 34 hours per week. However, in every time category, women who were happy with their hours of work had better mental and physical health than women who would like to work either more hours or fewer hours. While ‘long part-time’ hours appear to be generally linked with optimal health for mid age women, it is certainly not the case that ‘one size fits all’. Factors such as type of caring responsibilities, and living arrangement were found to be associated with satisfaction with hours of paid employment.

Mishra G, Lee C, Brown W & Dobson A. Menopausal transitions, symptoms and country of birth: The Australian Longitudinal Study on Women’s Health. *Australian and New Zealand Journal of Public Health,* in press.

Objective*:* In the 1996 baseline surveys of the Australian Longitudinal Study of Women’s Health (ALSWH) 36.1% of mid-age women (45-50) and 35% of older

Presentations 2002

Lee C.

Effects of physical activity on emotional well-being among older women: analysis from Women's Health Australia.

9th Annual New Zealand Health Psychology Conference.

Auckland, New Zealand.

18-20 February 2002.

Young A.

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Symposium on Health Data Linkage: Its Value for Australian health Policy Development and Policy Relevant Research.

Sydney, New South Wales, Australia.

20-21 March 2002.

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National Medicine Symposium.

Canberra, Australian Capital Territory, Australia.

21-22 March 2002.

Warner-Smith P, Mishra G & Brown P.

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International Time Use Conference.

Ontario, Canada.

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International Time Use Conference.

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9th World Congress on Clinical Nutrition.

London, England.

24-26 June, 2002.

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The First Australasian Nutrition, Physical Activity and Cancer Conference.

Sydney, New South Wales, Australia.

24-26 June 2002.

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Research into practice: experiences from Women's Health Australia.

13th International Congress on Women's Health.

Seoul, Korea.

26-29 June 2002.

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Australian Centre for Tropical Health and Nutrition and Australasian College of Tropical Medicine 2002 Conference.

Brisbane, Queensland, Australia.

2-6 July 2002.

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16th Australian Statistical Conference Statistical Society of Australia Inc.

Canberra, Australian Capital Territory, Australia.

7-12 July 2002.

Dobson AJ.

Methodological problems with longitudinal studies: questions from the Australian Longitudinal Study on Women's Health.

16th Australian Statistical Conference Statistical Society of Australia Inc.

Canberra, Australian Capital Territory, Australia.

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Women's Health Australia, seven years on: contributions to the evidence base for health outcome policy and practice.

8th Annual National Conference: International Health Outcomes Conference 2002.

Canberra, Australian Capital Territory, Australia.

17-18 July 2002.

Byles J & Harris M.

A good night's sleep: sleeping difficulty and sleeping medication use among older Australian women.

8th Annual National Conference: International Health Outcomes Conference 2002.

Canberra, Australian Capital Territory, Australia.

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Keeping diabetes under control: using record linkage to evaluate health care and health outcomes for women with diabetes.

8th Annual National Conference: International Health Outcomes Conference 2002.

Canberra, Australian Capital Territory, Australia.

17-18 July 2002.

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Women's waterworks: evidence base for the development of continence management programmes in Australia.

8th Annual National Conference: International Health Outcomes Conference 2002.

Canberra, Australian Capital Territory, Australia.

17-18 July 2002.

Ball K, Brown W & Crawford.

Who does not gain weight?

7th International Congress of Behavioral Medicine.

Helsinki, Finland.

28-31 August, 2002.

Young A.

How can longitudinal data inform diabetes prevention strategies?: findings from the Australian Longitudinal Study on Women's Health.

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Helsinki, Finland.

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Guillemin M & Brown W.

Mid-age women, heart disease and risk.

34TH Annual Public Health Association of Australia Conference.

Adelaide, South Australia, Australia.

29 September – 2 October 2002.

Parker G.

Disciplinary collisions or complementary relationships: widening the methodological frame on gendered abuse research.

Australian Association for Social Research Annual Conference.

Blue Mountains, New South Wales, Australia.

1-4 October 2002.

Larson A, Bell M & Young A.

Relation between mobility and women's health.

11TH Biennial Conference of the Australian Population Association.

Sydney, New South Wales, Australia.

2-4 October 2002.

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Temporal dimensions of well-being among young, middle-aged and older women in Australia.

International Association for Time Use Research Conference 2002.

Lisbon, Portugal.

16-18 October 2002.

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Health in Difference- National Gay, Lesbian Transgender and Bisexual Health Conference.

Sydney, New South Wales, Australia.

1 November 2002.

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Measurement of socio-economic status for women in different generations and its relationships to health: contributions from the Australian Longitudinal Study on Women's Health.

Queensland University of Technology, Eighth International Health Summer School 2002.

Kelvin Grove, Queensland, Australia.

20-22 November 2002.

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Australian Health and Medical Research Congress.

Melbourne, Victoria, Australia.

25-29 November 2002.

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Who does not gain weight? Prevalence and predictors of weight maintenance among young women.

Australasian Society for Study of Obesity.

Members of the NHMRC Project Advisory Committee

Professor Janet Greeley (Chair)

Executive Dean, Faculty of Social Sciences

James Cook University

Mr Andrew Benson

Director, Research & Data Section, Office of Aboriginal and Torres Strait Islander Health

Department of Health and Ageing

Professor Adele Green

Epidemiology Unit

Queensland Institute of Medical Research

Professor Christine Ewan

Deputy Vice Chancellor, Academic

University of Western Sydney

Associate Professor David Roder

Head of Cancer Statistics Unit

The Cancer Council of South Australia

Associate Professor Helena Britt

Director, Family Medicine Research Unit

University of Sydney

Mr Brendan Gibson

Director, Workforce and Research Section, Population Health Division

Department of Health and Ageing

Financial Statement 2002

Expenditure January- December 2002
DHA income July 2001 – June 2002
Based on University of Newcastle Finance One System 28/10/02
Accounts 593-1029 and 593-1023

INCOME			EXPENDITURE			
Source	Details	Income	Items	Actual Expenditure 1/1/02 – 30/6/02	Actual Expenditure 1/7/02 – 28/10/02	Forward Estimate 29/10/02- 31/12/02
DHA	Contract	738,000	Shared research (UoN)	1,844	27,362	0
			Surveys & data entry	53,093	31,307	0
			Newsletter printing	0	11,733	10,588[b]
			Data linkage(NEC, HIC)	0	15,651	400
			Computer h'ware, s'ware	10,097	256	13,543[b]
			Equipment & maintenance	50	0	5,000[b]
			Postage & freight	15,592	12,451	1,905[b]
			Telephone	8,340	5,105	1,000[b]
			Printing, stationery, office supplies	379	2,184	500[b]
UoN	Research Contribution (salary)	57,600	General consumables/ Repairs	3,823	1,317	500[b]
U of N	Research Contribution	50,000	Travel/ Hospitality	8,366	17,724	8,000[b]
	Research Quantum	109,238	Salaries	216,496	176,197	78,859[b]
	Research Infrastructure Grant	3,747	On-costs	44,406	34,349	18,185[b]
	Conference Travel Grants	4,800	Annual Report	0	0	4,000[b]
			University Overhead charge	102,378	0	0
			Postgraduate scholarships/ fees	20,512	10,652	5,000[b]
TOTALS		$963,385		$485,382	$348,088	$147,290
						($17,375)

[b] *figures are estimates*

Inquiries

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http://www.newcastle.edu.au/centre/wha

A detailed description of the background, aims, themes, methods and progress of the study is given on the project web page. Questionnaires are also available on the website, along with contact details for the research team.

Abstracts of all papers published, papers accepted for publication, and conference presentations are also on the project website.

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