

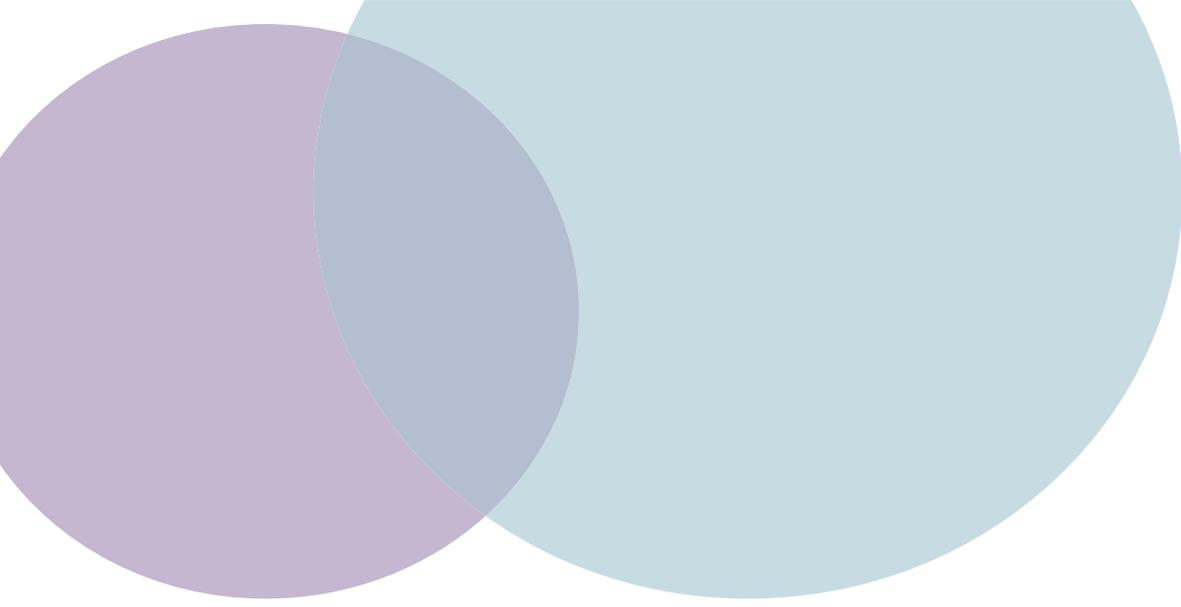


women's
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Annual Report
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Australian Longitudinal Study on Women's Health



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DIRECTOR'S REPORT

The Australian Longitudinal Study on Women's Health (ALSWH) continues to provide evidence about the health of Australian women and their use of health services. Now in its fourteenth year the Study involves around 40,000 women from three age cohorts, selected randomly from the Australian population. We expect to follow these women for over twenty years to track changes in health and life circumstances as they move through major life stages.

During 2009, we have assisted with development of a new National Women's Health Policy, which is scheduled to be announced by the Minister for Health and Ageing, Nicola Roxon in 2010. We provided summaries of our research findings in a wide range of areas including smoking, alcohol use, access to health services, weight control, caring, elder abuse, partner violence, and sexual and reproductive health, as well as assisting several other national organisations to assemble evidence to support their submissions.

Two major reports from ALSWH have been released this year. One is about the use and costs of medications and other medical care resources by women in Australia, and the other is about women's roles as carers. Summaries of the findings are included in this Report. In addition to the main survey work, projects investigating complementary and alternative medicine use, and postnatal depression are also underway.

This year we surveyed for the fifth time women born in 1973-78. Women in

this cohort are now aged 31-36, and the majority have young children or are considering motherhood. We also developed and pilot-tested the sixth survey of the 1946-51 cohort to be conducted in 2010 when these women are aged 59-64 years.

Thanks to the Australian Government Department of Health and Ageing for their continuing support of this study. I would particularly like to thank the many women who are giving their time over many years to participate in this research and contribute to improving the health of Australian women.

Annette Dobson

Annette Dobson
Study Director





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For more information please see www.alswh.org.au.

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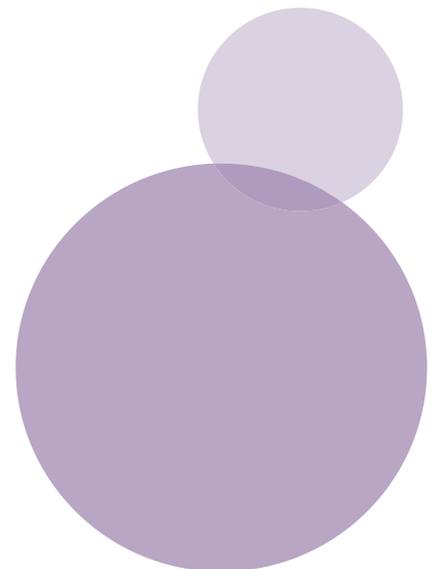
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CONGRATULATIONS TO OUR SUCCESSFUL GRADUATES FOR 2009

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Coping with miscarriage: Young women's experiences.

Supervisor: Professor Christina Lee

Nicole Arthur, PhD

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Marriage and cohabiting relationships: Is there a difference?

Supervisor: Professor Christina Lee

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Long term health impacts of intimate partner violence on mid-aged Australian women.

Supervisors: Professor Catherine D'Este & Dr Deborah Loxton

Nur Hikmayani, Master of Clinical Epidemiology

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Cardiovascular medication use and health-related Quality of Life in older women with diabetes

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Changes in young women's health behaviours in response to traumatic events.

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FEATURE A: USE AND COSTS OF MEDICATIONS & OTHER HEALTH CARE RESOURCES

Medications play an important role in preventing and managing illness and improving quality of life for Australian women. By analysing data from claims on the Pharmaceutical Benefits Scheme (PBS) run by Medicare Australia, we have been able to provide a detailed report to the Australian Government on medications claimed by Australian women. The term “claim” refers to a prescription filled by a pharmacist where the cost is at least partly subsidised by the PBS. Data were only obtained for ALSWH participants who gave their consent.

Women in the 1973-78 cohort were most likely to make claims for antidepressants, hormonal contraceptives and asthma medications (adrenergics and inhalants). Among women in the 1946-51 cohort, the most common claims were for medications for peptic ulcer or gastro-oesophageal reflux disease, lipid lowering agents, antidepressants and non-steroidal anti-inflammatory drugs (NSAIDs). Among women in the 1921-26 cohort, the most common claims were for lipid lowering agents, drugs for peptic ulcer or reflux, antithrombotic agents, NSAIDs, analgesics and antipyretics.

Claims for antidepressants were made by 8% of women in the 1973-78 cohort, 14% of women in the 1946-51 cohort and 18% of women in the 1921-26 cohort. Even so, many women who reported in the surveys that they had been told by a doctor that they had depression did not make claims for antidepressants (40%, 17% and 18% of the 1973-78, 1946-51, and 1921-26 cohorts respectively in 2005). Many women with depression continued to have claims for antidepressants for several years.

Among women in the 1946-51 and 1921-26 cohorts, the most common PBS claims were for cardiovascular medications (28% and 75% of women respectively). Most of these drugs were to lower blood pressure or cholesterol levels. Women in these cohorts also commonly used arthritis medications and proton pump inhibitors (PPIs) for reflux.

By analysing data over several years, we were able to examine continuity and change in medication use. Statins were the most commonly used lipid lowering drugs. Women with claims for statins

had lower socio-economic status and a history of cardiovascular disease and diabetes. However many women do not use statins for a long time; half the 1946-51 women who claimed for statins missed a repeat claim within 5 months although long-term use would be expected. Similarly, bisphosphonates, drugs used for osteoporosis, are intended for long-term use, but were often discontinued. In contrast, for initial treatment for reflux, PPI use for 2-4 weeks is recommended, but women continue to use the drugs for many months, possibly because the PPIs are also being used for gastro-protection from the side effects of other drugs, such as NSAIDs prescribed for arthritis.

Medication costs

Table 1 provides details on the number and costs of claims for the most common therapeutic sub-groups for women in each cohort. In each case, women tended to have more than one claim for these medications in a year with the highest number of claims being for lipid modifying agents for women in the 1946-51 and 1921-26 cohorts (averaging 11 claims), and the lowest number being for airway inhalants, opioids and beta-lactam/penicillin antibiotics. Among women in the 1973-78 cohort using antidepressants, each woman had a median of seven claims in 2005.



Table 1 Number of claims, medication types and costs for common therapeutic sub-groups per woman in 2005

Drug	No. of Claimants	Median no. claims /woman	Median cost to PBS /woman	Median out of pocket cost /woman
1973-78 cohort				
Antidepressants	360	7	\$52	\$113
Adrenergics, inhalants	210	2	\$60	\$29
Other drugs for obstructive airway diseases, inhalants	110	1	\$16	\$29
Beta-lactam antibacterials, penicillins	171	1	\$13	\$5
Opioids	85	1	\$4	\$5
1946-51 cohort				
Drugs for peptic ulcer & GORD*	1,170	7	\$183	\$55
Lipid modifying agents, plain	1,182	11	\$411	\$143
Antidepressants	1,125	8	\$73	\$57
Anti-inflammatory & antirheumatic products, non-steroids	925	3	\$28	\$29
Estrogens	537	4	\$35	\$14
1921-26 cohort				
Drugs for peptic ulcer & GORD*	2,057	11	\$417	\$28
Antithrombotic agents	2,034	4	\$25	\$14
Lipid modifying agents, plain	2,064	11	\$548	\$37
Other analgesics & antipyretics	1,915	3	\$15	\$9
Anti-inflammatory & antirheumatic products, non-steroids	1,394	4	\$62	\$14

*Gastro oesophageal reflux disease

Costs are presented as whole dollars.



Women in the 1921-26 cohort had the greatest number of claims for each group of drugs, but women from the 1946-51 and 1973-78 cohorts experienced the highest out of pocket costs for these medications, because of higher subsidies for older people. The highest total cost drug groups were for: the cardiovascular system, the nervous system, and the alimentary tract and metabolism.

These data show that patterns of medication use were complex, and medications were expensive to both the PBS and to the individual.

New Medicare items for health care

The 75+ health assessment is a Medicare subsidised general health check up for older people that can be repeated annually. Among the ALSWH participants in the 1921-26 cohort, fewer than 60% of women who were eligible had had the assessment between 1999 and 2005, but 40% had had two or more assessments. Women who had these assessments were more likely to rate their health as fair or poor and they had more GP visits, hospital admissions and medications.

The Diabetes Annual Cycle of Care (ACC) is designed to ensure better medical management for people with diabetes. The ACC includes the HbA1c blood test to assess control of blood glucose levels.

Among women in the 1946-51 cohort who have reported a diagnosis of diabetes, 29% had a ACC, 41% had a HbA1c test but not ACC, and 30% had neither. The comparable results for women in the 1921-26 cohort with diabetes is: 40% ACC, 46% HbA1c but not ACC, 14% neither.

These results suggest that these new Medicare items designed to improve care of people with chronic disease are not reaching all those they are designed to help. However, our detailed analyses failed to show any patterns of socio-economic, geographic, health or use of health services that were clearly and consistently related to 75+ or ACC assessments.

This report is summarised from Byles J, Loxton D, Berecki J, Dolja-Gore X, Gibson R, Hockey R, Robinson I, Parkinson L, Adamson L, Lucke J, Powers J, Young A, & Dobson A. Use and costs of medications and other health care resources: Findings from the Australian Longitudinal Study on Women's Health. Report prepared for the Department of Health and Ageing, June 2008.

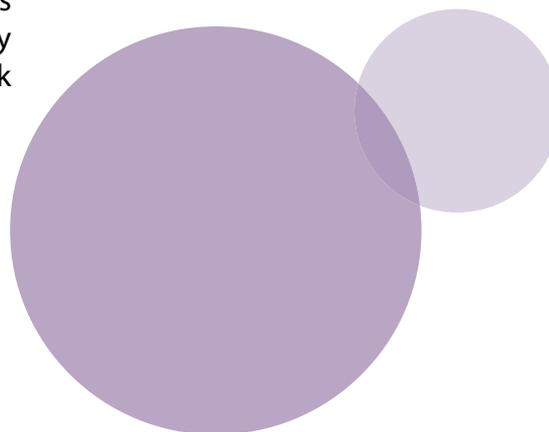


FEATURE B: CAREGIVING

In 2009, we investigated the transitions into and out of caring, carer needs, and use of interventions and services for women in the 1946-51 and 1921-26 cohorts. The research involved three phases, each with its own methodology and participant sample.

Phase 1: Caring and use of services in women born 1946-51

Data from a pilot substudy of 296 women (97 carers, 199 noncarers) who participated in pilot surveys for the 1946-1951 cohort was examined. We found that while carers were similar to noncarers on most demographic characteristics (age, marital status, residence, language spoken at home and level of education), they were less likely to be in the workforce than noncarers. Carers also had poorer mental health and less social support than noncarers. Carers themselves were not a homogenous group. Women who lived with the person they cared for, “live-in carers”, reported higher carer strain and were more likely to be the main care provider. They were also more likely to have been caring for a longer time, care for younger people (who were typically their husbands/partners), perform more activities of daily living (particularly the more intensive activities of daily living) and work part-time, if they are in the labour force. However, carers who did not live with their care recipient were more likely to care for older recipients (who were typically their parents), perform only instrumental activities of daily living and work full-time, if in the labour force.



Phase 2: Caring and use of services in women carers born 1921-26

The study was a nested cross-sectional substudy of the ALSWH, involving data from 280 carers who cared for someone who may have used community services. We found that carers had poorer mental and physical health compared to the entire 1921-26 cohort of the ALSWH. The carers who completed the survey provided the majority of the help for the care recipients compared to other unpaid carers or paid services. Use of services was low. However, when the services were used, the carers reported that these were easy to access and of a good quality, and that they received as much help as they wanted. The use of services, particularly respite care, was strongly driven by care recipient preference. The most commonly mentioned positive aspects of caring related to the characteristics of the relationship between the carer and care recipient, such as companionship, and personal concerns or attitudes of the carers, such as the carers' outlook on life and an appreciation for what they do have. The most discussed negative aspects of caring included restrictions on everyday life, dissatisfaction with the present situation, and repetitious routine.

Phase 3: Carer needs and transitions in women born 1921-26

To examine carer needs and changes in caring roles, exploratory and longitudinal analysis of data from Surveys 2, 3, 4, and 5 of the 1921-26 cohort was carried out. Of the women who responded, 60% did not provide care at any survey from Survey 2 (1999) to Survey 5 (2008). The remaining women included those who provided care at all four surveys (2%) and women who provided care at some time across the four surveys (38%). Therefore, of the women who provided care at some time during the surveys, the majority (95%) transitioned into or out of their caring roles. The effect of ten factors (including changes in caring, year of survey and sociodemographic and health factors), on seven health and community service outcomes (mental health, physical health, number of visits to the general practitioner (GP) and use of nursing or community health services, respite services, homemaking services and home maintenance services) was investigated. Women who never provided care typically had better outcomes compared to carers who lived with their care recipients but worse outcomes compared to



carers who lived elsewhere. Generally, women who used the services or had poorer health outcomes transitioned into or out of providing care for a care recipient who lived with them, and women who had better mental health were more likely to have transitioned into or out of providing care for a care recipient who lived elsewhere. The combination of factors that was related to poorer health, visiting the GP five or more times and use of services, is:

- Transitioning into or out of providing care for a live-in care recipient,
- Reporting difficulties managing on available income,
- Not providing care for grandchildren,
- Needing care themselves,
- Reporting sleep difficulties, and
- More memory decline.

Conclusions

- Policies need to recognise that carers and their situations are different and may change over time.
- Due to the transient nature of caring, services should be provided in a timely manner.
- Our results indicate that carers who provided care for a care recipient who lived with them, or transitioned into or out of this live-in caring role, had poorer health outcomes than carers who lived elsewhere. Policies should consider the particular needs of carers who live with the person for whom they care. As these carers may experience difficulty leaving their care recipient at home, adequate respite services to allow carers to visit health services, or in-home health visits, may be necessary to ensure adequate access to services.
- In particular, older women who are carers are at risk of poorer outcomes if they also have difficulties managing on their available income, do not provide care for grandchildren, need care themselves, and report sleep difficulties and memory decline. This finding emphasises the importance of adequate financial provision and health services for carers.

- Care recipient preference strongly drove the use of services, particularly respite care. Therefore, services should aim to improve acceptability and use of services by older care recipients.
- Framing the needs of the carer(s) and care recipient as a system where each affects the other may assist health services to provide for the needs of both in an efficient manner.
- Carers who were provided with services through the Department of Veterans' Affairs commended them highly. Other non-veterans service providers may be able to model their service delivery and availability after the Department of Veterans' Affairs.

This report is summarised from Mackenzie S, Tooth L, Lucke J, & Dobson A. Carrying the load: Transitions, needs and service use of Australian women carers. Report prepared for the Australian Government Department of Health and Ageing Carers Project, October 2009.



PUBLICATIONS

PUBLISHED PAPERS

Adams J, Sibbritt D & Young A.
A longitudinal analysis of older Australian women's consultations with complementary and alternative medicine (CAM) practitioners, 1996-2005.

Age & Ageing, 2009; 38(1): 93-99.

Objective: To determine the factors associated with complementary and alternative medicine (CAM) use among older Australian women over time.

Methods: A longitudinal analysis of postal questionnaires completed in 1996, 1999, 2002 and 2005 as part of the Australian Longitudinal Study on Women's Health.

Results: The percentage of women who consulted a CAM practitioner in the years 1996, 1999, 2002 and 2005 were 14.6%, 12.1%, 10.9% and 9.9%, respectively. Use of CAM increased as the number of reported symptoms increased and physical health deteriorated, for non-urban residents compared to urban residents.

Conclusion: Use of CAM amongst older women appears to be strongly influenced by poor physical health. There is also a suggestion that lack of access to conventional health care providers increases CAM use. There is also an overall decline in the use of CAM among older women as they age.

Anstey KJ, Byles JE, Luszcz MA, Mitchell P, Steel D, Booth H, Browning C, Butterworth P, Cummings RG, Healy J, Windsor TD, Ross L, Bartsch L, Burns RA, Kiely K, Birrell CL, Broe GA, Shaw J, & Kendig H.

Cohort profile: The Dynamic Analyses to Optimise Ageing (DYNOPTA) Project.

International Journal of Epidemiology. Advance Access published January 17, 2009; doi: 10.1093/ije/dyn276

No abstract available.

Ball K, Burton NW & Brown WJ.
A prospective study of overweight, physical activity and depressive symptoms in young women.

Obesity, 2009; 17(1): 66-71.

This study examined the prospective associations of BMI, physical activity (PA), changes in BMI, and changes in PA, with depressive symptoms. Self-reported data

on height, weight, PA, selected sociodemographic and health variables and depressive symptoms (CESD-10) were provided in 2000 and 2003 by 6,677 young adult women (22–27 years in 2000) participating in the Australian Longitudinal Study on Women's Health (ALSWH). Results of logistic regression analyses showed that the odds of developing depressive symptoms at follow-up (2003) were higher in women who were overweight or obese in 2000 than in healthy weight women, and lower in women who were active in 2000 than in sedentary women. Changes in BMI were significantly associated with increased odds of depressive symptoms at follow-up. Sedentary women who increased their activity had lower odds of depressive symptoms at follow-up than those who remained sedentary. Increases in activity among initially sedentary young women were protective against depressive symptoms even after adjusting for BMI changes. These findings indicate that overweight and obese young women are at risk of developing depressive symptoms. PA appears to be protective against the development of depressive symptoms, but does not attenuate the depressive symptoms associated with weight gain. However, among initially sedentary young women, even small increases in PA over time may reduce the odds of depressive symptoms, regardless of weight status.

Beatty L, Lee C & Wade T.
A prospective examination of perceived stress as a mediator of the relationship between life-events and QOL following breast cancer.

British Journal of Health Psychology, 2009; 14(4): 789-804.

Objectives: This study prospectively investigated the relationship between life-events, perceived stress, and quality of life (QOL) following breast cancer diagnosis, using the bio-behavioural model of cancer stress as a framework.

Design: A longitudinal, self-report design was used.

Methods: Three waves of data from 10,543 mid-aged Australian women (aged 45–50 at Survey 1) were collected over 5 years as part of a population-based survey. From this group a subsample (N= 140) were identified who did not have breast cancer at Survey 1, but who subsequently developed breast cancer. Random regression growth curve analyses were used to investigate whether perceived stress mediated the relationship between initial life-events and change in QOL functioning overtime.

Results: Prospective evidence was generated for each

of the three criteria for testing mediation. As the number of life-events before breast cancer increased, women were significantly more likely to experience corresponding increases in perceived stress over the 5-year period. As the level of perceived stress before breast cancer increased, women were more likely to experience deteriorations overtime in role emotional, role physical, vitality, bodily pain, physical functioning, and social functioning. As the number of life-events before breast cancer increased, women were at significant risk of experiencing deteriorations overtime in bodily pain, social functioning, role emotional, and vitality. Mediation analyses revealed that perceived stress fully mediated the relationship between initial life-events and two QOL domains; role-emotional and social functioning.

Conclusion: Results partially supported the bio-behavioural model of cancer stress, but the model does not appear to fit the data as well as predicted, and may require revision.

Berecki J, Begum N & Dobson A.
Symptoms reported by women in mid-life: Menopausal transition or ageing?
Menopause, 2009; 16 (5): 1021-1029.

Objective: The aim of this study was to determine which symptoms commonly reported by women at mid-life are associated with menopausal transition, after adjusting for ageing, life events, sociodemographics and lifestyle factors.

Design: Middle-aged women participating in the Australian Longitudinal Study on Women's Health between 1996 (Survey 1, ages 45 to 50) and 2007 (Survey 5) were included in the analyses if natural menopausal status could be determined at any survey (n=8649 out of 13716 participants). Natural menopausal status was determined from reported menstruation patterns. A survival function describing age at menopause was computed. Logistic regression models for repeated measures were used to estimate the association between menopausal stage and symptom prevalence.

Results: There were 6814 (79%) women who reached natural menopause before 2007. The median age at menopause was 52 years. Compared to the premenopausal phase, the menopause was associated with hot flushes (odds ratio= 8.6 [95% CI= 7.5 to 9.9]), night sweats (5.5 [4.8 to 6.3]), and to a lesser extent with stiff or painful joints (1.6 [1.4 to 1.8]), difficulty sleeping (1.4 [1.2 to 1.6]), and poor/fair self-rated health (1.6 [1.3 to 1.9]), after controlling for confounders. Prevalence of some symptoms was still raised more than 7 years after menopause. Headaches/migraines were negatively, and urinary incontinence positively associated with ageing.

Conclusions: Treatment such as hormone replacement therapy should be targeted at vasomotor symptoms

which are most strongly associated with menopause rather than at less specific symptoms related to ageing per se.

Berecki-Gisolf J, Humpheys-Reid L, Wilson AJ & Dobson A.

Angina symptoms are associated with mortality in older women with ischemic heart disease.

Circulation, 2009; 120(23): 2330-2336.

Background: Angina symptoms have been reported to predict mortality in men. The aim of this study was to investigate the association between angina symptoms and mortality in women.

Methods and Results: In 2004, 873 older participants in the Australian Longitudinal Study on Women's Health with self-reported ischemic heart disease participated in a nested substudy. Women were 77 to 83 years of age; 165 (19%) died during the 4.5-year follow-up. Angina symptoms were established with Seattle Angina Questionnaire (SAQ) scores for physical limitation, angina frequency, angina stability, and disease perception. Proportional hazards modeling was used to examine the relationship of SAQ score differences with mortality. Physical limitation scores were associated with mortality, with hazard ratios of 1.1, 1.9, and 3.4 for mild, moderate, and severe versus minimal limitations, respectively (P<0.001). Angina frequency scores were also associated with death, with hazard ratios of 1.2, 1.2, and 4.8 for mild, moderate, and severe versus minimal angina frequency, respectively (P<0.001). Age (hazard ratio 1.1, 95% confidence interval 1.0 to 1.2), pulmonary disease (hazard ratio 1.6, 95% confidence interval 1.2 to 2.3), and kidney disease (hazard ratio 1.7, 95% confidence interval 1.1 to 2.5) were statistically significantly associated with mortality in a multivariable model of clinical predictors. In a combined model with SAQ scores and clinical predictors, SAQ scores for physical limitation and angina stability remained statistically significantly associated with mortality.

Conclusions: In older women with ischemic heart disease, angina symptoms assessed by use of SAQ scores for physical limitations and angina frequency were associated with mortality; SAQ scores may therefore prove to be a useful tool for risk assessment in this patient group.

Brown WJ, Heesch K & Miller Y.
Life events and changing physical activity patterns in women at different life stages.
Annals of Behavioral Medicine, 2009; 37(3): 294-305.

Background: The impact of life events on physical activity (PA) is little understood.

Purpose: The purpose of this study is to examine relationships between specific life events and changes

in PA in three cohorts of Australian women.

Methods: Young (N=7,173; age 22–27 years), mid-age (N=8,762; 51–56 years), and older (N=6,660; 73–78 years) participants in the Australian Longitudinal Study on Women's Health completed surveys on two occasions, 3 years apart.

Results: About one third of the young and mid-age women and one quarter of the older women were "active" at both times. Decreasing PA was associated with marriage and childbirth in young women and with declining health in older women. Increasing PA was associated with retirement and death of spouse in the mid-age women. Stressful events such as divorce, harassment at work, and violence were also associated with changing PA.

Conclusions: There were significant associations between age-specific life events and PA changes. Understanding these relationships could inform interventions for preventing declines in activity at specific life stages.

Byles J, Millar C, Sibbritt D & Chiarelli P. Living with urinary incontinence: A longitudinal study of older women. *Age and Ageing*, 2009; 38(3): 333-338.

Background: Urinary incontinence carries major social burden and considerable costs for health care systems.

Objective: The aim of this study was to investigate changes in continence status among a large cohort of older women, and to identify factors associated with incidence of incontinence in later life. **Subjects:** participants of the Australian Longitudinal Study of Women's Health (ALSWH), aged 70–75 years in 1996 and who have completed four health surveys over the past 10 years.

Methods: Continence status across four survey periods, spanning 9 years, were defined according to women's reports of 'leaking urine' at each survey. Generalised estimating equation (GEE) models were used in longitudinal analyses of the factors associated with changing continence status over time.

Results: This study presents longitudinal data on the prevalence and incidence of incontinence from a large cohort of older women, over 9 years of follow-up. Over this time, 14.6% (95% CI 13.9–15.3) of the women in the study who had previously reported leaking urine 'rarely' or 'never' developed incontinence, and 27.2% (95% CI 26.2%, 28.3%) of women participating in Survey 4 (S4) in 2005 reported leaking urine 'sometimes' or 'often' at that survey, with women being twice as likely to report incontinence at S4 as they were 6 years earlier. Longitudinal models demonstrated the association between incontinence and dementia ($P<0.001$; OR = 2.34; 95% CI 1.64, 3.34), dissatisfaction with physical ability ($P<0.001$; OR = 1.70; 95% CI 1.52, 1.89), falls to the ground ($P<0.001$; OR=1.23; 95% CI 1.13, 1.33), BMI ($P<0.001$; OR=2.18; 95% CI 1.70, 2.80

for obese), constipation ($P<0.001$; OR 1.46; 95% CI 1.34–1.58), urinary tract infection ($P<0.001$; OR 2.07; 95% CI 1.89–2.28), history of prolapse ($P\leq 0.001$; OR = 1.53; 95% CI 1.35, 1.74) and prolapse repair ($P=0.002$; OR = 1.23; 95% CI 1.08, 1.40). Stroke ($P= 0.01$), parity ($P= 0.017$) and hysterectomy ($P= 0.026$) and number of visits to the general practitioner ($P= 0.040$) were less strongly associated with incontinence in the final longitudinal model. Incontinence was not significantly associated with area of residence ($P=0.344$), education ($P=0.768$), smoking ($P=0.055$), diabetes ($P=0.072$), attending support groups ($P= 0.464$) or attending social groups ($P= 0.022$).

Conclusion: Strong associations between BMI, dysuria and constipation indicate key opportunities to prevent incontinence among older women.

Byles, JE.

Obesity: The new global threat to healthy ageing and longevity.

Health Sociology Review, 2009; 18(4): 412-422.

Population ageing and increasing life expectancy are triumphs of modern times. However, advances in healthy ageing and longevity are not inevitable. Recent data suggest that future generations may not age in as good health as those who are currently over 65 years of age, particularly because of the rising prevalence of obesity. Obesity is a worldwide phenomenon associated with urbanisation and global changes to food availability, eating habits, and increasing sedentary activities. The current and future global impacts of this condition on health, health care expenditure, and human life expectancy are momentous.

Fitzgerald D, Berecki-Gisolf J, Hockey R & Dobson A.

Hysterectomy and weight gain.

Menopause, 2009; 16(2): 279-285.

Objective: To investigate whether overweight women are more likely to have a hysterectomy and whether hysterectomy leads to increased weight gain.

Methods: Survey data of middle-aged women participating in the Australian Longitudinal Study on Women's health in 1996 (ages 45–50 y; n = 13,125), 1998 (n = 10,612), 2001 (n = 10,293), and 2004 (n = 9309) included self-reported height, weight, and hysterectomy. First, we conducted a cohort analysis, comparing body mass index (BMI) of women categorized according to hysterectomy status. Second, we used a nested case-control analysis to compare weight gain between women who underwent hysterectomy and women who did not have a hysterectomy, matched for pre-hysterectomy weight, height, menopause status, and educational level.

Results: At survey 1, the mean BMI of women who subsequently had a hysterectomy was greater than

that of women without a hysterectomy by survey 2 (difference, 1.1 kg/m²; 95% CI, 0.5-1.6). Results were similar for surveys 2 to 3 (BMI difference, 0.8 kg/m²; 95% CI, 0.3-1.3) and surveys 3 to 4 (BMI difference, 0.8 kg/m²; 95% CI, 0.1-1.4). Having a hysterectomy between surveys 1 and 2 was not associated with percentage of weight gain over the 3 or 6 years after survey 2 (odds ratio, 0.98 [95% CI, 0.96-1.01] and 0.99 [95% CI, 0.97-1.01], respectively). Having a hysterectomy between surveys 2 and 3 was weakly associated with percentage of weight gain over 3 years (odds ratio, 1.03 [95% CI, 1.00-1.05]).

Conclusions: Among women older than 45 to 50 years, hysterectomy did not lead to greater weight gain but was more likely to be performed in heavier women.

Herbert D, Lucke J & Dobson A. Infertility, medical advice and treatment with fertility hormones and/or in vitro fertilisation: A population perspective from the Australian Longitudinal Study on Women's Health.

Australian and New Zealand Journal of Public Health, 2009; 33(4): 358-364.

Objective: To identify the factors associated with infertility, seeking advice and treatment with fertility hormones and/or in vitro fertilisation (IVF) among a general population of women.

Methods: Participants in the Australian Longitudinal Study on Women's Health aged 28-33 years in 2006 had completed up to four mailed surveys over 10 years (n=9,145). Parsimonious multivariate logistic regression was used to identify the socio-demographic, biological (including reproductive histories), and behavioural factors associated with infertility, advice and hormonal/IVF treatment.

Results: For women who had tried to conceive or had been pregnant (n=5,936), 17% reported infertility. Among women with infertility (n=1031), 72% (n=728) sought advice but only 50% (n=356) used hormonal/IVF treatment. Women had higher odds of infertility when: they had never been pregnant (OR=7.2, 95% CI 5.6-9.1) or had a history of miscarriage (OR range=1.5-4.0) than those who had given birth (and never had a miscarriage or termination).

Conclusion: Only one-third of women with infertility used hormonal and/or IVF treatment. Women with PCOS or endometriosis were the most proactive in having sought advice and used hormonal/IVF treatment. Implications: Raised awareness of age-related declining fertility is important for partnered women aged ~30 years to encourage pregnancy during their prime reproductive years and reduce the risk of infertility.

Herbert D, Lucke J & Dobson A. Pregnancy losses in young Australian women: Findings from the Australian Longitudinal Study on Women's Health.
Women's Health Issues, 2009; 19; 21-29.

Introduction: Little research has examined recognized pregnancy losses in a general population. Data from an Australian cohort study provide an opportunity to quantify this aspect of fecundity at a population level.

Method: Participants in the Australian Longitudinal Study on Women's Health who were aged 28-33 years in 2006 (n=9,145) completed up to 4 mailed surveys over 10 years. Participants were categorized according to the recognized outcome of their pregnancies, including live birth, miscarriage/ stillbirth, termination/ ectopic, or no Pregnancy.

Results: At age 18-23, more women reported terminations (7%) than miscarriages (4%). By 28-33 years, the cumulative frequency of miscarriage (15%) was as common as termination (16%). For women aged 28-33 years who had ever been pregnant (n = 5,343), pregnancy outcomes were as follows: birth only (50%); loss only (18%); and birth and loss (32%), of which half (16%) were birth and miscarriage. A comparison between first miscarriage and first birth (no miscarriage) showed that most first miscarriages occurred in women aged 18-23 years who also reported a first birth at the same survey (15%). Half (51%) of all first births and first miscarriages in women aged 18-19 ended in miscarriage. Early childbearers (28 years) often had miscarriages around the same time period as their first live birth, suggesting proactive family formation. Delayed childbearers (32-33 years) had more first births than first miscarriages.

Conclusion: Recognized pregnancy losses are an important measure of fecundity in the general population because they indicate successful conception and maintenance of pregnancy to varying reproductive endpoints.

Herbert D, Lucke J & Dobson A. Infertility in Australia circa 1980: An historical population perspective on the uptake of fertility treatment by Australian women born in 1946-51.

Australian and New Zealand Journal of Public Health, 2009; 33(6):507-514.

Objective: To estimate the prevalence of lifetime infertility in Australian women born in 1946-51 and examine their uptake of treatment.

Methods: Participants in the Australian Longitudinal Study on Women's Health born in 1946-51 (n=13,715) completed up to four mailed surveys from 1996 to 2004. The odds of infertility were estimated using logistic regression with adjustment for sociodemographic and reproductive factors.

Results: Among participants, 92.1% had been

pregnant. For women who had been pregnant (n=12738): 56.5% had at least one birth but no pregnancy loss (miscarriage and/or termination); 39.9% experienced both birth and loss; and 3.6% had a loss only. The lifetime prevalence of infertility was 11.0%. Among women who reported infertility (n=1511), 41.7% used treatment. Women had higher odds of infertility when they had reproductive histories of losses only (OR range 9.0-43.5) or had never been pregnant (OR=15.7, 95%CI 11.8-20.8); and higher odds for treatment: losses only (OR range 2.5-9.8); or never pregnant (1.96, 1.28-3.00). Women who delayed their first birth until aged 30+ years had higher odds of treatment (OR range 3.2-4.3).

Conclusions: About one in ten women experienced infertility and almost half used some form of treatment, especially those attempting pregnancy after 1980. Older first time mothers had an increased uptake of treatment as assisted reproductive technologies (ART) developed. **Implications:** This study provided evidence of the early uptake of treatment prior to 1979 when the national register of invasive ART was developed and later uptake prior to 1998 when data on noninvasive ART were first collected.

Johnstone M & Lee C.
Young Australian women's aspirations for work and family.

Family Matters, 2009; 815-14.

Drawing upon data collected from the first three waves of the younger cohort of the Australian Longitudinal Study on Women's Health (ALSWH), this article investigates the work and family aspirations held by young Australian women, the consistency of these aspirations over time, and socio-demographic markers of differences between women with varying aspirations. The majority of young Australian women aspired to a stable relationship, at least one child, and some form of paid work, demonstrating that balancing paid work and family will continue to be important to young Australian women. Aspirations for marriage, two children and full-time paid employment were the most common responses, although some inconsistency in employment and motherhood aspirations was observed across waves. Socio-demographic variables, including area of residence, educational qualification and occupational category, were significant predictors of subsequent aspirations.

Johnstone M & Lee C.
Young Australian women's aspirations for work and family: Individual and sociocultural differences.

Sex Roles, 2009; 61: 204-220.

The arguments underlying Hakim's Lifestyle Preference Theory have initiated debate over the importance of individual preferences, versus social and structural constraints, in women's work and family patterns. This

paper investigates the role of sociocultural factors in lifestyle preferences. A total of 6,929 Australian women, aged 25–30 years, from the Australian Longitudinal Study on Women's Health (ALSWH), were categorised into Hakim's Lifestyle Preference Groups, based on their aspirations for work and family. Rather than cutting across social groups, membership into Lifestyle Preference Groups was significantly related to sociodemographic variables. Further, the findings suggested that Hakim's definition of 'adaptive' women may be too limited to capture the variability of the large number of young Australian women aspiring to combine paid work and family.

Korda R, Banks E, Clements M & Young A.
Is inequity undermining Australia's 'universal' health care system? Socio-economic inequalities in the use of specialist medical and non-medical ambulatory health care.

Australian and New Zealand Journal of Public Health, 2009; 33(5): 458-465.

Objectives: To quantify need-adjusted socioeconomic inequalities in medical and non-medical ambulatory health care in Australia and to examine the effects of specific interventions, namely concession cards and private health insurance (PHI), on equity.

Methods: We used data from a 2004 survey of 10,905 Australian women aged 53–58 years. We modelled the association between socioeconomic status and health service use—GPs, specialists, hospital doctors, allied and alternative health practitioners, and dentists—adjusting for health status and other confounding variables. We quantified inequalities using the relative index of inequality (RII) using Poisson regression. The contribution of concession cards and PHI in promoting equity/inequity was examined using mediating models.

Results: There was equality in the use of GP services, but socioeconomically advantaged women were more likely than disadvantaged women to use specialist (RII=1.41, 95% CI:1.26–1.58), allied health (RII=1.21, 1.12–1.30), alternative health (RII=1.29, 1.13–1.47) and dental (RII=1.61, 1.48–1.75) services after adjusting for need, and they were less likely to visit hospital doctors (RII=0.74, 0.57–0.96). Concession cards reduced socioeconomic inequality in GP but not specialist care. Inequality in dental and allied health services was partly explained by inequalities in PHI.

Conclusions and implications: Substantial socioeconomic inequity exists in use of specialist and non-medical ambulatory care in Australia. This is likely to exacerbate existing health inequalities, but is potentially amenable to change.

Lee C, Ford J & Gramotnev H.
The Life Control Scale: Validation with a population cohort of middle-aged Australian women.

International Journal of Behavioural Medicine, 2009; 16(2): 148-157.

Objective: The concept of perceived control is central to many theories of physical and emotional wellbeing. However, existing measures are lengthy and generally focus on job control. In epidemiological research, brief measures and those which can be applied across entire populations are needed. Among women in particular, a substantial minority have no paid work, while most also have major unpaid family commitments which may affect wellbeing through their effect on control. Thus, we evaluated the six-item Life Control Scale (Bobak, Pikhart, Hertzman, Rose & Marmot, 1998) with a population-based sample of middle-aged women.

Methods: A population-based sample of 11,223 women aged 50 to 55, participating in the Australian Longitudinal Study on Women's Health, completed the Life Control Scale as part of an omnibus survey of health and psychosocial factors.

Main Results: The scale was demonstrated to be unifactorial and internally reliable, and to show the expected relationships with several measures of socioeconomic position, physical health, and mental health.

Conclusions: The Life Control Scale is brief, valid, and broadly applicable in epidemiological research.

Loxton D, Powers J, Schofield M, Hussain R & Hosking S.

Inadequate cervical cancer screening among mid-aged Australian women who have experienced partner violence.

Preventive Medicine, 2009; 48: 184-188.

Objectives: Partner violence is linked to cervical cancer and other gynaecological conditions. However, results of current research into associations between partner violence and cervical cancer screening have been inconclusive. Therefore, the current research investigates the association between partner violence and inadequate cervical cancer screening.

Methods: Participants were 7312 women aged 45–50 years who responded to the Australian Longitudinal Study on Women's Health population-based surveys in 1996 and 2004. The women self-reported frequency of Pap smears via mailed questionnaire.

Results: Women who had experienced partner violence at least eight years earlier, compared with those who had not, were more likely to report current inadequate screening (OR: 1.42, 95%CI: 1.21; 1.66). After adjusting for known barriers to preventive screening (education, income management, marital status, general practitioner visits, chronic conditions) and depression, partner violence was independently associated with

inadequate Pap tests (OR: 1.20, 95%CI: 1.01; 1.42). This association was no longer significant once access to a GP of choice was added to the model (OR: 1.18, 95%CI: 0.99; 1.40).

Conclusions: The significance of this study lies not just in confirming a negative relationship between cervical cancer screening and partner violence, but in suggesting that good access to a physician of choice appears to significantly decrease this negative relationship.

Lucke J, Watson M & Herbert D.
Changing patterns of contraceptive use in Australian women.

Contraception, 2009; 80(6): 533-539.

Background: This longitudinal analysis examines how patterns of contraceptive use changed over 11 years among Australian women born between 1973 and 1978.

Study Design: The analysis included 6708 women sampled from the Australian universal health insurance database who completed four self report postal surveys between 1996 and 2006. Change over time in use of any method of contraception and the common single methods of the oral contraceptive pill and condom was examined using a longitudinal logistic regression model.

Results: The oral contraceptive pill was the most commonly used single method at each survey (27–44%) but decreased over time. Over time, contraceptive users were increasingly more likely to be single or in a de facto relationship or to have had two or more births.

Conclusions: Women's contraceptive use and the factors associated with contraceptive use change over time as women move into relationships, try to conceive, have babies and complete their families.

Magin P, Sibbritt D & Bailey K.
The relationship between psychiatric illnesses and skin disease: A longitudinal analysis of young Australian women.

Archives of Dermatology, 2009; 145(8): 896-902.

Objective: To examine longitudinally the relationship between skin disease and psychological morbidity in young women, testing the hypothesis that psychological morbidity (depression, anxiety, and stress) is a factor in the causation of skin disease.

Design: The Australian Longitudinal Study on Women's Health was designed to investigate multiple factors affecting the health and well-being of women over a 20-year period. Data from 3 surveys (conducted in 2000, 2003, and 2006) were analyzed. Multivariate longitudinal generalized estimating equation models, with and without time lag, were used to determine significant factors associated with skin disease (including anxiety, depressive symptoms, and stress).

Setting: An Australian community-based study.
Participants: Women, aged 22 to 27 years at the time of the first survey, were randomly selected from the Australian National Medicare database. Participant numbers for the surveys from the years 2000, 2003, and 2006 were 9688, 9081, and 8910, respectively.
Main Outcome Measures: Outcome measures were the scores from the Center for Epidemiologic Studies Depression Scale, the Perceived Stress Questionnaire for Young Women, and an item to elicit reporting of anxiety symptoms.

Results: Of 6630 women providing data on skin diseases on all 3 surveys, 8.0% (n=523) reported having skin problems on all 3 occasions; 12.1% (n=803) on 2 occasions; and 23.9% (n=1582) on 1 occasion. On the 2000, 2003, and 2006 surveys, prevalence of skin problems was 24.2%, 23.9%, and 24.3%, respectively. In the generalized estimating equation models, depression symptoms and stress (but not anxiety) were significantly associated with skin problems ($P < .005$).

Conclusion: The findings of this relationship of depression and stress to skin disease may have considerable clinical implications, including implications for adjunctive psychological interventions.

McDermott L, Dobson A & Owen N.
Determinants of continuity and change over 10 years in young women's smoking.
Addiction, 2009; 104(3): 478-487.

Aims: To examine prospectively continuity and change in smoking behaviour and associated attributes over a 10-year period.

Design, setting and participants: Participants (initially aged 18–23 years) in the Australian Longitudinal Study on Women's Health completed postal questionnaires in 1996, 2000, 2003 and 2006. The analysis sample was 6840 women who participated in all surveys and provided complete smoking data. Measurements Outcome variables were transitions in smoking behaviour between surveys 1 and 2, 2 and 3, 3 and 4 and 1 and 4. Attributes that differentiated continuing smokers from quitters, relapsers from ex-smokers, and adopters from never smokers were examined for each survey period. Explanatory variables included previous smoking history, demographic, psychosocial, life-style risk behaviour and life-stage transition factors.

Findings: Over 10 years, 23% of participants either quit, re-started, adopted or experimented with smoking. Recent illicit drug use and risky or high-risk drinking predicted continued smoking, relapse and smoking adoption. Marriage or being in a committed relationship was associated significantly with quitting, remaining an ex-smoker and not adopting smoking. Living in a rural or remote area and lower educational attainment were associated with continued smoking;

moderate and high physical activity levels were associated positively with remaining an ex-smoker.

Conclusions: Life-style and life-stage factors are significant determinants of young women's smoking behaviour. Future research needs to examine the inter-relationships between tobacco, alcohol and illicit drug use, and to identify the determinants of continued smoking among women living in rural and remote areas. Cessation strategies could examine the role of physical activity in relapse prevention.

Polimeni A, Austin S & Kavanagh A.
Sexual orientation and weight, body image and weight control practices among young Australian women.

Journal of Women's Health, 2009; 18(3): 355-362.

Objective: We compare weight, body image and weight control practices of young adult Australian women according to sexual orientation.

Methods: Cross-sectional analyses of the second survey of 9,683 young adult women in the Australian Longitudinal Study on Women's Health (ALSWH); the weight, weight control practices, and body image of exclusively heterosexual, mainly heterosexual, bisexual and lesbian women were compared.

Results: Lesbians were less likely to be dissatisfied with their body shape (OR 0.54, 95% CI 0.32-0.92) than exclusively heterosexual women. Compared with exclusively heterosexual women, bisexual women were more likely to weight cycle (OR 2.22 95% CI 1.22-4.03) and mainly heterosexual and bisexual women were more likely to engage in unhealthy weight control practices such as smoking (mainly heterosexuals: OR 1.83, 95% CI 1.38-2.44 and bisexuals: OR 3.80, 95% CI 1.94-7.44), and cutting meals (mainly heterosexuals: OR 1.58, 95% CI 1.23-2.02 and bisexual women: OR 3.45, 95% CI 1.82-6.54); mainly heterosexual women were more likely to vomit (mainly heterosexuals: OR 2.41, 95% CI 1.73-3.36) and use laxatives (mainly heterosexuals: OR 1.56, 95% CI 1.12-2.19).

Conclusions: Future research should explore why bisexual and mainly heterosexual women are at higher risk of disordered eating behaviours. Understanding why lesbians have a healthier body image would also provide insights into how to improve the body image of other groups. It is critical that public health policy and practice addresses less healthy weight control practices of sexual minority groups.

Read CM, Bateson DJ, Weisberg E & Estoesta J.
Contraception and pregnancy then and now: Examining the experiences of a cohort of mid age Australian women.

Australian and New Zealand Journal of Public Health, 2009; 49(4): 429-433.

Background: More than 50% of women who have an unplanned pregnancy report using a contraceptive

method. Since the launch of the pill 50 years ago, a number of cross-sectional surveys have examined contraceptive use in the Australian context. There is, however, little data on contraceptive use and efficacy over a woman's reproductive years.

Aim: To determine the pattern of contraceptive use of Australian women over their reproductive lifespan, with particular emphasis on the relationship between contraceptive use and pregnancy.

Method: One thousand women from the mid-age cohort of the Australian Women's Longitudinal Study were invited to participate in the Family Planning survey by completing a questionnaire about their reproductive histories.

Results: Completed questionnaires were received for 812 women. The contraceptive pill was the most commonly ever used contraceptive method at 94% and also the most commonly used method prior to all pregnancies. Contraceptive failure increased with increasing gravidity; 11.4% with the first pregnancy to 23.0% with the fourth pregnancy, while 28.8% of the respondents reported an 'accidental' pregnancy due to stopping contraception for reasons such as concern about long-term effects and media stories.

Conclusions: While surveys indicate that 66–70% of Australian women use a contraceptive method, more than half of unplanned pregnancies apparently occur in women using contraception. The modern Australian woman, in common with her predecessors, still faces significant challenges in her fertility management. This survey provides a longitudinal perspective on contraceptive use in relation to pregnancy and highlights the issue of efficacy of contraceptives in real-life situations.

Ross LA, Anstey KJ, Kiely K, Windsor TD, Byles JE, Luszcz MA & Mitchell P.

Older drivers in Australia: Trends in driving status and cognitive and visual impairment.

Journal of the American Geriatrics Society, 2009; 57(10): 1868-1873.

Objectives: To investigate self-reported driving status within three Australian states; associations between demographic, health, and functional factors and driving status; and the extent to which remaining a driver in spite of cognitive and visual impairments varies as a function of sex.

Design: Secondary data analysis of a pooled data set.

Setting: Australian communities.

Participants: Adults aged 65 to 103 (N=5,206) from the Dynamic Analyses to Optimise Ageing (DYNOPTA) project. DYNOPTA is a unique data set created through the harmonization and pooling of data across nine separate Australian longitudinal studies of aging conducted between 1990 and 2007 (N=50,652).

Measurements: Driving status, demographic characteristics, Mini-Mental State Examination score, visual acuity, physical activity, and occupation.

Results: Men and participants with higher-level occupations had greater odds of driving. Older age, more medical conditions, and poorer vision increased the odds of not driving. Persons who were divorced, widowed, or never married were at a greater risk than married adults of not driving. Descriptive analyses revealed a large proportion of men with probable visual or cognitive impairments who reported driving. Subsequent comparative analyses between the DYNOPTA sample and other published U.S. and Canadian data revealed lower proportions of current drivers among Australian women and those at older ages, although there were consistently lower proportions of drivers within Australia and Canada than in the United States.

Conclusion: The rate of men with probable dementia or visual impairments who reported driving is of particular concern. Research and policy need to focus on evidence-based assessment of older drivers and development of appropriate interventions and programs to maintain the mobility and independence of older adults.

Rowlands I & Lee C.

Correlates of miscarriage among young women in the Australian Longitudinal Study on Women's Health.

Journal of Reproductive and Infant Psychology, 2009; 27(1): 40-53.

While evidence suggests that miscarrying women experience poor mental health, the research is limited and comparison groups are frequently unrepresentative or lacking altogether. The current study examined the health and wellbeing of miscarrying women in relation to their peers by comparing them on selected relevant sociodemographic, gynaecological, psychological and health behaviour variables. Survey 3 of the Younger cohort of the nationally representative Australian Longitudinal Study on Women's Health was used to identify 998 women aged 24-31 who reported ever having had a miscarriage, and 8083 women who reported never having had a miscarriage. Although univariate analyses indicated that women who had had miscarriages experienced poorer mental health, multivariate analysis indicated that these effects were explained by sociodemographic and lifestyle differences. Stepwise logistic regression showed that miscarrying women were more likely to be married, to have had a child, to be current or ex smokers and to be not using contraception, to have lower levels of education; and to be of low socio-economic status. These results indicate that the strongest correlates of miscarriage among young women are those associated with preparing for, or experiencing, motherhood, and

it may be that these factors rather than the miscarriage itself explain any excess of mental health problems in this population.

Sibbritt D & Adams J.

Back pain amongst 8,910 young Australian women: A longitudinal analysis of the use of conventional providers, complementary and alternative medicine (CAM) practitioners and self-prescribed complementary and alternative medicine (CAM).

Clinical Rheumatology, 2009; 29(1):25-32.

Back problems and back pain are amongst the most prevalent conditions afflicting Australians and carry high direct and indirect costs for the health care systems of all developed countries. A major gap in the research literature on this topic is the longitudinal analysis of health seeking behaviour for people with back pain. All studies to date have been cross-sectional and it is important that the use of different providers (both conventional and complementary and alternative medicine, CAM) is examined over time. This study analysed data from a longitudinal study conducted over a 3-year period on 8,910 young Australian women. Information on health service use, self-prescribed treatments, and health status was obtained from two questionnaires mailed to study participants in 2003 and 2006. We found that there is little difference in the consultation practices or use of self-prescribed CAM between women who recently sought help for back pain and women who had longer-term back pain; the only difference being that women with longer-term back pain consulted more with chiropractors. We conclude that women who seek help for their back pain are frequent visitors to a range of conventional and CAM practitioners and are also high users of self-prescribed CAM treatments. The frequent use of a range of conventional providers and practitioner-based and self-prescribed CAM amongst women with back pain warrants further investigation.

Smith MD, Russell A & Hodge P.

Do incontinence, breathing difficulties, and gastrointestinal symptoms increase the risk of future back pain?

The Journal of Pain, 2009; 10(8): 876-886.

Cross-sectional studies have suggested a relationship between respiratory disorders, incontinence, gastrointestinal symptoms, and back pain. However, longitudinal data are lacking. This study aimed to evaluate whether these disorders increase risk for the development of back pain. A total of 2943 younger, 2298 mid-age, and 2258 older women from the Australian Longitudinal Study on Women's Health who reported no back pain during the preceding 12 months were followed for 4, 2, and 3 years, respectively. Crude and adjusted associations between the development

of back pain and changes in the presence of incontinence, breathing difficulty, and gastrointestinal symptoms were assessed with logistic regression. Women with preexisting incontinence (prevalence ratios [PR]: 1.26 to 1.46) and gastrointestinal symptoms (PR: 1.24 to 1.44) and women who developed breathing problems (PR: 1.63 to 2.11) were more likely to develop back pain than women without such problems. Menstrual pain and allergy were also associated with back pain development. Consistent with predictions from physiological data, this study provides novel evidence that the presence and/or development of incontinence, respiratory problems, and gastrointestinal symptoms are associated with the development of back pain. This highlights the importance of comorbidities and suggests opportunities for future preventative interventions.

Stewart Williams JA.

Using non linear decomposition to explain the discriminatory effects of male-female differentials in access to care. A cardiac rehabilitation case study.

Social Science & Medicine, 2009; 69(7): 1072-1079.

This paper demonstrates the use of non-linear decomposition for identifying discrimination in referral to a cardiac rehabilitation (CR) program. The application is important because the methods are not commonly applied in this context. A secondary data analysis was conducted on a cohort of 2,375 patients eligible for referral (as defined) to an Australian hospital outpatient CR program (1 July 1996 to 31 December 2000) on the basis of inpatient discharge diagnosis codes. Data from a population-based disease register were linked to hospital inpatient statistics and CR program records. Cohort selection was established in accordance with first register recorded hospital separations having specified cardiac inpatient diagnoses for which CR was recommended. Using the literature as a guide, multivariate logistic regression methods tested the strength of statistical association between independent variables and CR referral. Compared with males, females had 40% fewer odds of being referred (OR=0.60 95% CI: 0.39 to 0.92). Non-linear decomposition was performed as a post-logistic regression technique to show the extent to which the sex-based inequality in referral (as defined here) was due to group characteristics (the relative distribution of endowments) compared with other influences not adjusted for in the model. The results showed that approximately 18% of the male-female inequality in referral was not explained by group characteristics, and on this basis 'discriminatory'. The extent to which individual endowments contributed to the explained part of the inequality was also of interest. The methods offer potentially useful tools for informing researchers, policy-makers, clinicians and others about unfair

discriminatory processes that influence access to health and social services.

Tudor-Locke C, Burton NW & Brown WJ. Leisure-time physical activity and occupational sitting: Associations with steps/day and BMI in 54–59 year old Australian women.

Preventive Medicine, 2009; 48: 64-68.

Objective: To assess whether combinations of leisure-time physical activity (PA) and occupational sitting were associated with steps/day and objectively measured body mass index (BMI) in women aged 54–59 years.

Methods: In 2005, 158 women (age=56.4±1.4) living in Brisbane, Australia, were measured for height and weight, wore a pedometer for 7 days, and reported frequency and duration of leisure-time PA and extent of occupational sitting. Four groups were formed: (1) sufficiently active and some/little/no occupational sitting (n=52); (2) sufficiently active and mostly/all occupational sitting (n=29); (3) insufficiently active and some/little/no occupational sitting (n=43); and (4) insufficiently active and mostly/all occupational sitting (n=34). Analysis of variance (ANOVA) was used to examine group differences in mean steps/day and BMI.

Results: Mean±standard deviation (SD) steps/day for each group (indicated by numerical order above) was: (1) 9997±2854; (2) 9424±3120; (3) 8995±2965; (4) 7276±2816 [F(3,154)=6.139, p=.001]. BMI (kg/m²) was: (1) 25.5±3.9; (2) 26.9±4.1; (3) 26.5±4.7; (4) 29.7±7.9 [F(3,154)=4.57, p=.004]. Mean steps/day were significantly lower, and BMI significantly higher, in group 4 than in all other groups. No other differences were significant.

Conclusions: These cross-sectional data suggest that it might be important to consider both leisure-time PA and occupational sitting when considering strategies to increase steps/day and promote healthy BMI in midage women.

Vagenas D, McLaughlin D & Dobson A. Regional variation in the survival and health of older Australian women: A prospective cohort study.

Australian and New Zealand Journal of Public Health, 2009; 33(2): 119-125.

Objective: Older people may act as sensitive indicators of the effectiveness of health systems. Our objective is to distinguish between the effects of socio-economic and behavioural factors and use of health services on urban-rural differences in mortality and health of elderly women.

Methods: Baseline and longitudinal analysis of data from a prospective cohort study. Participants were a community-based random sample of women (n=12778) aged 70-75 years when recruited in 1996

to the Australian Longitudinal Study on Women's Health. Measures used were: urban or rural residence in Australian States and Territories, socio-demographic characteristics, health related behaviour, survival up to 1 October 2006, physical and mental health scores and use of medical services.

Results: Mortality was higher in rural than in urban women (hazard ratio, HR 1.14; 95% CI, 1.03,-1.26) but there were no differences between States and Territories. There were no consistent baseline or longitudinal differences between women for physical or mental health, with or without adjustment for socio-demographic and behavioural factors. Rural women had fewer visits to general practitioners (odds ratio, OR=0.54; 95% CI, 0.48-0.61) and medical specialists (OR=0.60; 95% CI, 0.55-0.65).

Conclusions: Differences in use of health services are a more plausible explanation for higher mortality in rural than urban areas than differences in other factors. Implications: Older people may be the 'grey canaries' of the health system and may thus provide an 'early warning system' to policy makers and governments.

PUBLISHED CONFERENCE PROCEEDINGS

Bruck D & Astbury J. Sleeping difficulty in young women: Comparative influence of demographic, illness, lifestyle, abuse and affective factors.

Sleep and Biological Rhythms, 2009; 7(1): A24.

Different factors in relation to self reported difficulty sleeping in young Australian women aged in their late 20s were examined. Two multiple regression models were compared in terms of their prediction of difficulty sleeping over the last 12 months. Both models incorporated the same demographic, illness, lifestyle and abuse variables, however, the second model also included two affective variables: self reported symptoms of depression and intense anxiety. It was hypothesised that in the second model any predictive influence of the demographic, illness, lifestyle and abuse variables on sleeping difficulty would be reduced, due to controlling for depression and anxiety symptoms.

Methods: The data was self-reported by the "younger" cohort, aged 24–30 years in the third wave of the Australian Longitudinal Study of Women's Health in 2003. Two sub-groups within the sample are compared: a difficulty sleeping group – "often" (n = 971) and a group with no major difficulty sleeping – "never" or "rarely" (n = 6115). Those who said

they “sometimes” had difficulty sleeping were not considered unless they took prescription sleeping medication. The mean age was 27.14 years (SD = 1.45). The return rate was 65.4%. A series of analyses were conducted with difficulty sleeping versus good sleep as the dependent variable and dichotomous, ordinal, and interval variables in five groups: Demographic: employment, highest qualification, income level. Illness: any diagnosed major illness (physical or mental) in last 12 months. Lifestyle: frequency of binge drinking, combining drugs with alcohol, daily smoking, brisk walking and bodyweight dissatisfaction. Abuse: any abuse (emotional, sexual, physical) in the last 3 years. Affective: report of symptoms of depression or intense anxiety in last 12 months (4 point scale).

Results: Model 1: All 10 demographic, illness, lifestyle, and abuse variables were submitted to a logistic regression (OLS) with difficulty sleeping as the dependent variable. Seven of the variables were found to be significant predictors of difficulty sleeping ($p < 0.05$). Model 2: The two affective variables (depression, intense anxiety) were also included and the logistic regression rerun (12 variables). In Model 2 the two affective variables were significant, but only two of the other 10 variables remained significant predictors (bodyweight dissatisfaction and abuse history).

Discussion: Self reported symptoms of depression and intense anxiety are the most important predictors of difficulty sleeping in young women. When these variables were controlled most of the previously significant demographic, illness and lifestyle variables were no longer significant predictors.

Chojenta C, Lucke J & Loxton D.
Does social support reduce the likelihood of postnatal depression in Australian mothers?

Archives of Women's Mental Health, 2009; 12 (Suppl 1): S20.

This study examined the relationship between social support and postnatal depression. Longitudinal data was analysed, collected through the Australian Longitudinal Study on Women's Health (ALSWH). The ALSWH started in 1996 when the younger cohort were aged 18–23, and participants have completed follow up surveys on a three yearly basis. Almost 6800 younger women have completed the second (2000), third (2003) and fourth (2006) follow up surveys, and of these women 9.8% reported being diagnosed or treated for postnatal depression in the three years prior to completing the fourth survey. Among other measures of health and lifestyle, participants were also asked a series of items derived from the Medical Outcomes Study (MOS) Social Support Index from Survey 2 onwards in order to measure perceived social support. This analysis compared the self-rated social support for mothers who have experienced PND with those who have not reported experiencing PND at

the fourth survey. While significant results were not evident for some subscales of social support, the strongest association was found with affectionate support and positive social interaction, with mothers who rated their support as being available only some of the time significantly more likely than other women to experience postnatal depression. These results indicate that having positive social supports prior to and around the time of the birth of a child has a significant impact on the mental health of mothers.

Ferguson A, Craig H & Spencer E.
Exploring the potential for corpus-based research in speech-language pathology.
In M Haugh, K Burridge, J Mulder & P Peters (Eds.), *Selected Proceedings of the Human Communication Science Net Workshop on Building the Australian National Corpus: 2008* (pp. 30-36). Sommerville, MA: Cascadia Proceedings Project.

No abstract available.

Mooney R.
A study of conviction: Desires and doubts about having children.
The Future of Sociology: Proceedings of the Australian Sociological Association Conference 2009.

This paper investigates the strength of conviction with which women aged 27-32 years discussed their childbearing aspirations, bringing together both quantitative and qualitative responses to this question. Analyses found that although the participants tick box ‘yes’ or ‘no’, answers pointed overwhelmingly to aspirations for children, their interview narratives revealed a sliding scale of certainty. Many women expressed both desires for and doubts about having children, with their conviction usually shaped by a balance between maternal feeling, competing priorities, planned timing and perceptions of choice. The findings support the argument that women's reproductive decisions are predominantly the result of the circumstances in which they are made, as opposed to representing personal choice.

ACCEPTED PAPERS

Berecki J, Spallek M, Hockey R & Dobson A.
Height loss in elderly women is preceded by osteoporosis and is associated with digestive problems and urinary incontinence.

Osteoporosis International

Introduction: Height loss is associated with osteoporosis but little is known about its consequences. We aimed to examine risk factors for height loss and symptoms associated with height loss.

Methods: Elderly participants of the Australian Longitudinal Study on Women's Health (aged 70-75 in 1996) who provided data on height at any two consecutive surveys (held in 1996, 1999, 2002 and 2005) were included (N=9852). A regression model was fitted with height loss as the outcome and socio-demographics, osteoporosis and other risk factors as explanatory variables. Symptoms related to postural changes or raised intraabdominal pressure were analysed using height loss as an explanatory variable.

Results: Over 9 years, average height loss per year was -0.12% (95% confidence interval [-0.13 to -0.12]) of height at baseline. Height loss was greater among those with osteoporosis, low body mass index, and those taking medications for sleep and anxiety. After adjusting for confounders, symptoms associated with height loss of $\geq 2\%$ were heartburn/indigestion (odds ratio=1.19 [1.01 to 1.40]), constipation (1.18 [1.01 to 1.37]), and urinary stress incontinence (1.20 [1.02 to 1.41]).

Conclusion: These findings highlight the importance of monitoring height among the elderly in general practice, and targeting associated symptoms.

Brown WJ, Hockey R & Dobson, AJ.
Effects of having a baby on weight gain.

American Journal of Preventive Medicine

Background: Women often blame weight gain in early adulthood on having a baby.

Purpose: The aim was to estimate the weight gain attributable to having a baby, after disentangling the effects of other factors that influence weight change at this life stage.

Methods: A longitudinal study of a randomly selected cohort of 6458 Australian women, aged 18-23 years in 1996, was conducted. Self-report mailed surveys were completed in 1996, 2000, 2003, and 2006, and data were analyzed in 2008.

Results: On average, women gained weight at the rate of 0.93% per year (95% CI=0.89, 0.98) or 605 g/year (95% CI=580, 635) for a 65-kg woman. Over the 10-year

study period, partnered women with one baby gained almost 4 kg more, and those with a partner but no baby gained 1.8 kg more, than unpartnered childless women (after adjustment for other significant factors: initial BMI and age; physical activity, sitting time, energy intake (2003); education level, hours in paid work, and smoking).

Conclusions: Having a baby has a marked effect on 10-year weight gain, but there is also an effect attributable to getting married or living with a partner. Social and lifestyle as well as energy balance variables should be considered when developing strategies to prevent weight gain in young adult women.

Eime RM, Harvey JH, Payne WR & Brown WJ.
Does sports club participation contribute to health-related quality of life?

Medicine and Science in Sport and Exercise

Given the social nature of participation in sport, we hypothesised that club sports participants would have greater well-being and quality of life than participants in other forms of physical activity (PA).

Purpose: To examine Health Related Quality of Life (HRQoL) and life satisfaction in women who participate in three contrasting forms of PA; club sport, gym activities and walking.

Methods: This was a cross-sectional study of the relationship between type of physical activity setting and measures of HRQoL (SF-36) and life satisfaction in 818 women living in rural Victoria, Australia in 2007. Data were also compared with those from a normative sample of 2345 women.

Results: After adjustment for potential confounders (age, education, marital status, children aged <16 years, perceived financial stress, level of recreational PA), four of the eight SF-36 subscales, the SF-36 mental health component summary score and life satisfaction were significantly higher in the club sport group than in the other groups.

Conclusion: Although cross-sectional research cannot establish causal links, the results suggest that participation in club sport may enhance the health benefits of PA.

Flicker L, McCaul KA, Almeida OP, Hankey GJ, Jamrozik K, Brown W & Byles J.

Body mass index and mortality in men and women aged 70 to 75 years.

Journal of the American Geriatric Society

No abstract available.

Herbert D Lucke J & Dobson A.
Depression: An emotional obstacle to seeking medical advice for infertility.
Fertility and Sterility

Objective: To investigate the mental and general health of infertile women who have not sought

medical advice for their recognized infertility, and therefore, not represented in clinical populations.

Design: Longitudinal cohort study. **Setting:** Population-based. **Patient(s):** Participants in the Australian Longitudinal Study on Women's Health aged 28-33 years in 2006 who had ever tried to conceive or had been pregnant (n=5936). **Intervention(s):** None. **Main outcome measure(s):** Infertility; not seeking medical advice

Result(s): Compared with fertile women (n=4905), infertile women (n=1031) had higher odds of self-reported depression (OR=1.20, 95%CI 1.01-1.43), endometriosis (5.43, 4.01-7.36), polycystic ovary syndrome (9.52, 7.30-12.41), irregular periods (1.99, 1.68-2.36), Type II diabetes (4.70, 1.79-12.37) or gestational diabetes (1.66, 1.12-2.46). Compared with infertile women who sought medical advice (n=728), those who had not sought medical advice (n=303) had higher odds of self-reported depression (1.67, 1.18-2.37), other mental health problems (3.14, 1.14-8.64), urinary tract infections (1.67, 1.12-2.49), heavy periods (1.63, 1.16-2.29) or a cancer diagnosis (11.33, 2.57-49.89). Infertile women who had or had not sought medical advice had similar odds of reporting an anxiety disorder or anxiety-related symptoms.

Conclusion(s): Women with self-reported depression were unlikely to seek medical advice for infertility. Depression and depressive symptoms may be barriers to seeking medical advice for infertility.

Lowe J.

Does systematically organized care improve outcomes for women with diabetes?

Journal of Evaluation in Clinical Practice

No abstract available.

Lucke J, Brown W, Tooth L, Loxton D, Byles J, Spallek M, Powers J, Hockey R, Pachana N & Dobson A.

Health across generations: Findings from the Australian Longitudinal Study on Women's Health.

Biological Research for Nursing

Interpretation of changes in health and health care utilisation patterns across the lifespan depends on understanding of the effects of age, period and cohort. The purpose of this paper is to illustrate differences between three generations of women in demographic, behavioural and health status indicators, over a period of 12 years from 1996 to 2008. The paper examines data from the Australian Longitudinal Study on Women's Health (ALSWH), a broad-ranging project funded by the Australian Government Department of Health and Ageing and involving three age groups of women (born between 1973-78, 1946-51, and 1921-26) who were first surveyed in 1996 and will

be followed-up every three years until at least 2015. Patterns in selected demographic factors (marital status and level of educational qualification), health risk factors (smoking, alcohol consumption, physical activity, body mass index) and health conditions (asthma, hypertension, diabetes and depression) were examined in order to illustrate examples of biological age, generational differences or period effects that affect all age groups and generations simultaneously. The results can be used to inform the development of responsive and effective models for both prevention and management of chronic disease, including health and aged care systems

Marshall A, Miller Y, Burton N & Brown W. Measuring total and domain-specific sitting: A study of reliability and validity. *Medicine and Science in Sport and Exercise*

Purpose: Although independent relationships between sitting behaviors (mainly television viewing) and health outcomes have been reported, few studies have examined the measurement properties of self-report sitting questions. This study assessed gender specific test-retest reliability and validity of a questionnaire that assessed time spent sitting on weekdays and weekend-days: 1) traveling to/from places; 2) at work; 3) watching television; 4) using a computer at home; and 5) for leisure, not including television.

Methods: Test-retest reliability of domain-specific sitting-time (min/d) on week-days and weekend-days was assessed using data collected on two occasions (median 11 d apart). Validity of domain-specific self-reported sitting time on week-days and weekend-days was assessed against log data and sedentary accelerometer data.

Results: Complete repeat questionnaire and log data were obtained from 157 women (aged 51-59 years) and 96 men (aged 51-65 years).

Reliability coefficients were high for week-day sitting time at work, watching television and using a computer at home ($r_s=0.84-0.78$), but lower for weekend-days across all domains ($r_s=0.23-0.74$). Validity coefficients were highest for week-day sitting time at work and using a computer at home ($r_s=0.69-0.74$). With the exception of computer use and watching television for women, validity of the weekend-day sitting time items were low.

Conclusions: This study confirms the importance of measuring domain- and day-specific sitting time. The measurement properties of questions that assess structured domain-specific and week-day sitting time were acceptable and may be used in future studies that aim to elucidate associations between domain-specific sitting and health outcomes.

McCaul KA, Almeida OP, Hankey GJ, Jamrozik K, Byles JE & Flicker L.

Alcohol intake and mortality in men and women over the age of 65 years – a prospective cohort study.

Addiction

No abstract available.

Parkinson L, Gibson R, Robinson I & Byles J.
Older women and arthritis: Tracking impact over time.

Australasian Journal on Ageing

No abstract available

Ross L, Anstey K, Kiely K, Windsor T, Byles J, Luszcz M & Mitchell P.

Older drivers in Australia: Trends in driving status and cognitive and visual impairment.

Journal of the American Geriatrics Society

Objectives: To investigate self-reported driving status within three Australian states; associations between demographic, health, and functional factors and driving status; and the extent to which remaining a driver in spite of cognitive and visual impairments varies as a function of sex.

Design: Secondary data analysis of a pooled data set. Setting: Australian communities. Participants: Adults aged 65 to 103 (N=5,206) from the Dynamic Analyses to Optimise Ageing (DYNOPTA) project. DYNOPTA is a unique data set created through the harmonization and pooling of data across nine separate Australian longitudinal studies of aging conducted between 1990 and 2007 (N=50,652). Measurements: Driving status, demographic characteristics, Mini-Mental State Examination score, visual acuity, physical activity, and occupation.

Results: Men and participants with higher-level occupations had greater odds of driving. Older age, more medical conditions, and poorer vision increased the odds of not driving. Persons who were divorced, widowed, or never married were at a greater risk than married adults of not driving. Descriptive analyses revealed a large proportion of men with probable visual or cognitive impairments who reported driving. Subsequent comparative analyses between the DYNOPTA sample and other published U.S. and Canadian data revealed lower proportions of current drivers among Australian women and those at older ages, although there were consistently lower proportions of drivers within Australia and Canada than in the United States.

Conclusion: The rate of men with probable dementia or visual impairments who reported driving is of particular concern. Research and policy need to focus on evidence-based assessment of older drivers and development of appropriate interventions and

programs to maintain the mobility and independence of older adults.

Sibbritt D & Adams J.
Back pain amongst 8,910 young Australian women: A longitudinal analysis of the use of conventional providers, complementary and alternative medicine (CAM) practitioners and self-prescribed complementary and alternative medicine (CAM).

Clinical Rheumatology

Back problems and back pain are amongst the most prevalent conditions afflicting Australians and carry high direct and indirect costs for the health care systems of all developed countries. A major gap in the research literature on this topic is the longitudinal analysis of health seeking behaviour for people with back pain. All studies to date have been cross-sectional and it is important that the use of different providers (both conventional and complementary and alternative medicine, CAM) is examined over time. This study analysed data from a longitudinal study conducted over a 3-year period on 8,910 young Australian women. Information on health service use, self-prescribed treatments, and health status was obtained from two questionnaires mailed to study participants in 2003 and 2006. We found that there is little difference in the consultation practices or use of self-prescribed CAM between women who recently sought help for back pain and women who had longer-term back pain; the only difference being that women with longer-term back pain consulted more with chiropractors. We conclude that women who seek help for their back pain are frequent visitors to a range of conventional and CAM practitioners and are also high users of self-prescribed CAM treatments. The frequent use of a range of conventional providers and practitioner-based and self-prescribed CAM amongst women with back pain warrants further investigation

Sibbritt D, Byles J & Tavener M.
Older Australian women's use of dentists: A longitudinal analysis over 6 years.

Australasian Journal of Ageing

No abstract available.

Stewart Williams JA, Byles, JE & Inder K.
Equity of access to cardiac rehabilitation: The role of system factors.

International Journal of Equity in Health.

Background: When patient selection processes determine who can and cannot use healthcare there can be inequalities and inequities in individuals' opportunities to benefit. This paper evaluates the influence of a hospital selection process on opportunities to access outpatient cardiac rehabilitation (CR).

ACCEPTED CONFERENCE PROCEEDINGS

Methods: A secondary data analysis was conducted on a cohort of inpatients (n=2,375) who were all eligible for invitation to an Australian CR program. Eligibility was determined by hospital discharge diagnosis codes. Only invited patients could attend. Logistic regression analysis tested the extent to which individual patient characteristics were statistically significantly associated with the outcome 'invitation' after adjusting for cardiac disease and other factors.

Results: Less than half of the eligible patients were invited to the CR program. After allowing for known factors that may have justified not being selected, there was bias towards inviting males, younger patients, married patients, and patients who nominated English as their preferred language.

Conclusions: Health service managers typically monitor service utilisation patterns as indicators of access but often pay little attention to ways in which locally determined system factors influence access to care. The paper shows how a hospital selection process can unreasonably influence patients' opportunities to benefit from an evidence-based healthcare program.

van Uffelen J, Watson M, Dobson A & Brown W. **Sitting time is associated with weight, but not with weight gain in mid-aged Australian women.**

Obesity

The aim of this study was to examine the associations between sitting time, weight and weight gain in Australian women born in 1946-1951. Data were from 8233 women who completed surveys for the Australian Longitudinal Study on Women's Health in 2001, 2004, and 2007. Associations between sitting time and weight, and between sitting time and weight change in each three year period were examined using repeated measures modeling. The associations between weight and change in sitting time were also examined. Analyses were stratified for BMI categories: normal weight ($18.5 \leq \text{BMI} < 25$), overweight ($25 \leq \text{BMI} < 30$), and obese ($\text{BMI} \geq 30$). In cross-sectional models, each additional hour of sitting time was associated with 110 grams (95%CI: 40-180) and 260 grams (95%CI: 140-380) additional weight in overweight and obese women respectively (fully adjusted model). In prospective analyses sitting time was not consistently associated with weight change, after adjustment for other variables, and weight was not associated with change in sitting time over successive three year periods. In conclusion, although the cross-sectional associations between sitting time and weight were evident in overweight and obese women, there was no consistent association between sitting time and weight gain. A potential explanation is that prospective associations may only be apparent over longer periods of time. These results do not support a role for reducing sitting time as a short-term means of weight control in mid-aged women.

Ferguson A, Craig H & Spencer E.

Exploring the potential for corpus-based research in speech-language pathology.

*Selected Proceedings of the 2008 HCSNet
Workshop on Designing the Australian National
Corpus: Mustering Languages*

This paper reviews current and potential uses of corpus-based research in the field of speech-language pathology, in order to identify the research directions that could be explored through corpus-based methodology. In recent years, a range of theoretical perspectives and research methodologies in sociolinguistics has been applied to the analysis of the spoken and written discourse of children with specific language impairment and adults with acquired language impairment associated with brain damage. However, these methods have typically been integrated with experimental research design, using relatively small numbers of participants. Additionally, studies of pathological discourse face important questions about establishing the range of typical variation in language use in the general community, and such questions necessarily require larger sampling than is possible in the context of most research studies. The usefulness of corpus-based research in addressing these issues is discussed.

CONFERENCE PRESENTATIONS

Astbury J.

The impact of forced sex on psychological health, high risk health behaviours and service use.

Sexual Violence Research Initiative Forum, Johannesburg, South Africa, 6-8 July 2009.

Au N.

Employment, long work hours and obesity among women.

International Health Economics Association World Congress, Beijing, China, 14 July 2009.

Au N.

Employment, long work hours and obesity among women.

31st Australian Conference for Health Economists, Hobart, Tasmania, 1 October 2009.

Berecki J, Begum N & Dobson A.

Symptoms reported by women in mid-life: Menopausal transition or ageing

Poster presentation at the European Menopause and Andropause Society 8th European Congress on Menopause, London, United Kingdom, 16-20 May 2009.

Blumfield M, Hure A, MacDonald-Wicks L, Patterson A, Smith R & Collins C.

The food choices of Australian women during pregnancy.

Nutrition Society of Australia & Nutrition Society of New Zealand Joint Annual Scientific Meeting Conference 2009, Newcastle, New South Wales, 8-11 December 2009.

Brown WJ, Hockey R & Dobson A.

Determinants of weight gain in young women.

Heart Foundation Conference 2009, Brisbane, Queensland, 14-16 May 2009.

Brown WJ.

Developing valid and reliable estimates of sitting time for large scale prospective studies, population based studies and intervention trials.

American College of Sports Medicine Annual Meeting, Seattle, United States of America, 27-30 May 2009.

Brown WJ.

Changes in physical activity across the lifespan: Australian Longitudinal Study on Women's Health.

American College of Sports Medicine Annual Meeting, Seattle, USA, 27-30 May 2009.

Brown W, Hockey R & Dobson A.

Ten year weight gain in Australian women: What difference does having a baby make?

Symposium contribution at the International Society for Behavioral Nutrition and Physical Activity 2009 Conference, Lisbon, Portugal, 17-20 June 2009.

Brown W.

Physical activity and health in women: Updating the evidence.

14th Annual Congress of the European College of Sport Science, Oslo, Norway, 24-27 June 2009.

Byles J, Gibson R, Tooth L, Brilleman S, Sibbritt D & Dobson A.

Living long and living well: Findings from the Australian Longitudinal Study on Women's Health.

International Association of Gerontology and Geriatrics XIXth World Congress of Gerontology and Geriatrics, Paris, France, 5-9 July 2009.

Byles J, Tavener M, Parkinson L, Everingham C, Warner Smith P & Stevenson D.

All in a day's work: Women transform retirement.

Poster presentation at the International Association of Gerontology and Geriatrics XIXth World Congress of Gerontology and Geriatrics, Paris, France, 5-9 July 2009.

Byles, J.

Women's health across the lifespan: Findings from the Australian Longitudinal Study on Women's Health.

World Health Organisation, Geneva, Belgium, 17 July 2009.

Byles J, Gibson R, Tooth L & Dobson A.

Age associated decline in physical mobility: Trends and transitions.

42nd Australian Association of Gerontology National Conference 2009 'Translation & Transformation', Canberra, Australian Capital Territory, 25-27 November 2009.

Byles J, Tooth L & Pachana N.

Australian Longitudinal Study on Women's Health: Women, health and ageing.

42nd Australian Association of Gerontology National Conference 2009 'Translation & Transformation', Canberra, Australian Capital Territory, 25–27 November 2009.

Byles J & Anstey K.

Combining longitudinal studies of ageing: A tale of two projects.

42nd Australian Association of Gerontology National Conference 2009 'Translation & Transformation', Canberra, Australian Capital Territory, 25–27 November 2009.

Byles J & Anstey K.

Findings on older Australians from the DYNOPTA project: Social networks, disease prevalence, mortality differentials and cognitive health.

42nd Australian Association of Gerontology National Conference 2009 'Translation & Transformation', Canberra, Australian Capital Territory, 25–27 November 2009.

Byles, J.

Population ageing: More than just numbers.

5th Asia Pacific Conference on Reproductive and Sexual Health Rights, Beijing, China, 18-20 October 2009.

Byles, J.

Women and alcohol: A healthy relationship?

13th Australasian Menopause Society Congress, Canberra, Australian Capital Territory, 18-20 September 2009.

Byles, J.

Women's health across the lifespan: Differences and diversity.

Australian Physiotherapy Association Conference Week, Sydney, New South Wales, 1-5 October 2009.

Calver J, McCaul KA, Almeida OP, Hankey GJ, Jamrozik K, Brown W, Byles J & Flicker L.

Body mass index and mortality in men and women aged 70 to 75 years.

International Association of Gerontology and Geriatrics XIXth World Congress of Gerontology and Geriatrics, Paris, France, 5-9 July 2009.

Chojenta C, Loxton D & Lucke J.

An examination of the narratives of women who have experienced postnatal depression in Australia.

5th International Mixed Methods Conference, University of Leeds, United Kingdom, 8-11 July 2009.

Conrad S, Tooth L & Dobson A.

Was Sesame Street on to something? Why do "people in your neighbourhood" matter, and how do they affect health outcomes?

Public Health Association of Australia Queensland Branch Second Annual Conference, Brisbane, Queensland, 23-24 July 2009.

Dobson A.

The health of women in rural areas.

10th National Rural Health Conference, Cairns, Queensland, 18 May 2009.

Dobson A.

Depression and anxiety associated with cardiovascular disease in mid-aged Australian women.

Heart Foundation Conference 2009, Brisbane, Queensland, 14-16 May 2009.

Dobson A.

Dietary patterns of Australian women.

Heart Foundation Conference 2009, Brisbane, Queensland, 14-16 May 2009.

Flicker L.

BMI and survival in older men and women aged 70 to 75 years.

Australian and New Zealand Society for Geriatric Medicine 2009 Annual Scientific Meeting, Fremantle, Western Australia, 7-9 September 2009.

Flicker L.

Sexual health in older men and women.

Australian and New Zealand Society for Geriatric Medicine 2009 Annual Scientific Meeting, Fremantle, Western Australia, 7-9 September 2009.

Flicker L.

Sexual behaviours in older men.

International Association of Gerontology and Geriatrics XIXth World Congress of Gerontology and Geriatrics, Paris, France, 5-9 July 2009.

Flicker L.

BMI and survival in older men and women aged 70 to 75 years.

International Association of Gerontology and Geriatrics XIXth World Congress of Gerontology and Geriatrics, Paris, France, 5-9 July 2009.

Goldstein G.

Physical activity as a risk factor for endometriosis.

Poster presentation at the American College of Physicians Maine Chapter Scientific Meeting, Maine, United States of America, 16 October 2009.

Goldstein G.

Physical activity as a risk factor for endometriosis.

Poster presentation at the Chicago Area Undergraduate Research Symposium Chicago, United States of America, 18 April 2009.

Goldstein G.

Physical activity as a risk factor for endometriosis.

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Loxton D.

(chair) Symposium: Qualitative findings from the Australian Longitudinal Study on Women's Health.

15th Annual Qualitative Health Research Conference, Vancouver, British Columbia, 4-6 October 2009.

Loxton D, Adamson L, Chojenta C & Rich J.

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Powers J & Loxton D.

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Sibbritt D.

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Spencer E, Ferguson A & Craig H.

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Taft A.

The impact of partner violence on the mental health of young Australian women reporting termination of pregnancy: Cohort analysis of a national population sample.

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Taft A.

The impact of abortion on depression: What role does partner violence play? Findings from the Australian Longitudinal Study on Women's Health.

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15th Annual Qualitative Health Research Conference, Vancouver, British Columbia, 4-6 October 2009.

Tavener M.

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42nd Australian Association of Gerontology National Conference Canberra, Australian Capital Territory, 25-27 November 2009.

Taylor A.

Letters home and postcards from the edge: Meaning and relationship in a large scale survey.

15th Annual Qualitative Health Research Conference, Vancouver, British Columbia, 4-6 October 2009.

Teede H, Deeks A, Gibson-Helm M, Lombard C, Jolley D, Paul E, Loxton D & Lisa M.

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van der Ploeg H, van Poppel M, Chey T, Bauman A & Brown W.

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van Gool K.

The impact of OOP costs on cervical screening: Evidence from an Australian panel dataset.

International Health Economics Association World Congress, Beijing, China, 14 July 2009.

van Uffelen J, Berecki J, Dobson A & Brown W.

What is a healthy body mass index for women in their 70s?

International Society for Behavioral Nutrition and Physical Activity 2009 Conference, Lisbon, Portugal, 17-20 June 2009.

Williams L, Germov J & Young A.

What effect does social class have on weight control in mid-age women? Evidence from the Australian Longitudinal Study on Women's Health (poster presentation).

17th European Congress on Obesity, Amsterdam, The Netherlands, 7 May 2009.

SEMINARS & WORKSHOPS

Byles J.

Using linked data for health services research.

ALSWH University of Newcastle Seminar, Newcastle, New South Wales, 9-10 November 2009.

Byles J.

Combining data from longitudinal studies.

FaHCSIA & ARACY Longitudinal Studies Workshop, Canberra, Australian Capital Territory, 12-13 November 2009.

Conrad S.

Was Sesame Street on to something? Why do “people in your neighbourhood” matter, and how do they affect health outcomes?

ALSWH University of Queensland Seminars, Herston, Queensland, 15 July 2009.

Dobson A.

Depression and anxiety associated with cardiovascular disease in mid-aged Australian women.

ALSWH University of Queensland Seminars, Herston, Queensland, 7 May 2009.

Dobson A.

Dietary patterns of Australian women.

ALSWH University of Queensland Seminars, Herston, Queensland, 7 May 2009.

Dobson A.

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ALSWH University of Queensland Seminars, Herston, Queensland, 7 May 2009.

Dobson A.

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Herbert D.

Infertility in Australia circa 1980: A historical population perspective on the uptake of fertility treatment by Australian women born in 1946-1951.

ALSWH University of Queensland Seminars, Herston, Queensland 23 April 2009.

Herbert D, Lucke J & Dobson A.

The reproductive epidemiology of infertility. *Mid-Candidature Review, Herston, Queensland, 20 July 2009.*

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Herbert D, Lucke J & Dobson A.

Barriers to access to medical advice for infertility: Societal and physical obstacles for women aged <35 years.

ALSWH University of Queensland Seminars, Herston, Queensland, 22 October 2009.

Loxton D.

The Australian Longitudinal Study on Women’s Health: Qualitative data.

Research Centre for Gender, Health and Ageing, Newcastle, 2009.

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Data Linkage Workshop, University of Newcastle, Newcastle, 2009.

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McKenzie S.

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ALSWH University of Queensland Seminars, Herston, Queensland, 19 October 2009.

McKenzie S.

An overview of the three phases of research on caring funded by DOHA during 2008 and 2009.

Carers and Carelink Section, Department of Health and Ageing, Canberra, Australian Capital Territory, 27 October 2009.

Mishra G.

A life course approach to reproductive ageing.

ALSWH University of Queensland Seminars, Herston, Queensland, 23 July 2009.

Mooney R.

A study of conviction: Desires and doubts about having children.

The School of Humanities and Social Science 2009 Research Higher Degree Symposium, University of Newcastle, Newcastle, New South Wales, 1 June 2009.

Patterson A.

The Australian Longitudinal Study on Women's Health: Dietary intake data.

Research Centre for Gender, Health and Ageing, Newcastle, 2009.

Pit S.

Changes in workforce participation among mid-age Australian women: the impact of socio-economic, behavioural, environmental and health-related factors.

ALSWH University of Queensland Seminars, Herston, Queensland, 09 July 2009.

Stewart Williams J.

Identifying modifiable predictors of acute hospital utilisation for chronic disease among women in NSW: Using linked data for health services research.

ALSWH University of Newcastle Seminar, Newcastle, New South Wales, 9-10 November 2009.

Stewart Williams J.

Working with hospital separations data. NSW Admitted Patients Data Collection. Using linked data for health services research.

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Stewart Williams J.

Evidence and equity in healthcare. Introducing a method to measure and explain inequalities in health.

Centre for Clinical Epidemiology & Biostatistics, University of Newcastle, Newcastle, New South Wales, 22 October 2009.

Wong K.

The long shadow of smoking.

ALSWH University of Queensland Seminars, Herston, Queensland, 4 June 2009.

COMPLETED STUDENT PROJECTS

Facilitating psychological adjustment to breast cancer diagnosis and treatment

Candidate: Lisa Beatty

Degree: PhD

University: School of Psychology, Flinders University

Supervisor: Professor Tracey Wade (School of Psychology, Flinders University)

Receiving a diagnosis of breast cancer is a significant stressor which can lead to numerous psychosocial adjustment difficulties; however the literature to date has yielded inconsistent findings with respect to the extent and duration of these impairments. Despite the occurrence of psychosocial difficulties, evidence suggests that most Australian women choose not to participate in conventional psychological therapy. This research aimed to: (i) empirically investigate the psychosocial adjustment issues that arise after diagnosis, and (ii) develop and evaluate an innovative self-help workbook intervention to address these difficulties. Four studies were conducted to address these two aims, with two studies examining psychosocial outcomes from quantitative and qualitative perspectives, and two studies evaluating the efficacy of self-help workbooks for women recently diagnosed and women who had recently completed treatment.

In terms of the quantitative analysis of adjustment, as measured by quality of life (QOL) impairment, the ALSWH data set was accessed. A doubly multivariate ANOVA was performed comparing three sequential groups of women who had been diagnosed with breast cancer with women without breast cancer. Results demonstrated that five QOL domains were impaired in women with breast cancer compared with women without breast cancer, but only at the survey completed at the time closest to diagnosis. No significant differences were found at later assessments, suggesting that only short-term impairments in QOL occur following diagnosis. A prospective examination of predictors of QOL was subsequently undertaken, and perceived stress was found to significantly mediate the relationship between pre-cancer life events and two QOL domains: role emotional and social functioning.

The qualitative examination of psychosocial impairments was conducted in three categories of

participants: patients, volunteers who provide support services to women with breast cancer, and oncology nurses. The thematic analysis revealed five broad areas of impairment, namely: coping with side effects; self-concept change; emotional adjustment; social support changes; and transition/survival concerns. Gaps in knowledge between nurses, volunteers and patients were determined and are summarised.

The two treatment studies compared the efficacy of self help workbooks using two randomised controlled trials. The first workbook was examined with 40 women who had completed treatment for breast cancer, while a similar second workbook was assessed with 49 women who had recently been diagnosed. Typically examined outcome measures of coping, mood, and quality of life were administered at baseline, then 3 and 6 months later. At both time periods, women reported feeling well supported by the workbook, and a protective effect on coping was demonstrated. However, only in recently diagnosed women was this effect statistically significant, and then only at the 3 month follow-up. In the recently diagnosed women, a statistically significant interaction favouring the workbook was also evident for PTSD symptoms. This improvement was maintained at 6 months but was not statistically



due to the smaller improvements made by control participants. In a less promising light, body image was negatively impacted by the workbook at both follow-up assessments. Potential explanatory mechanisms for this are discussed, and the need for revisions and future research are elaborated upon.

Overall, the findings of this thesis support research demonstrating the short-term global impact on QOL following breast-cancer diagnosis, and emphasised the importance of identifying predictors of adjustment

that can be targeted in interventions. The findings also suggest that while a self-help workbook may not be as powerful as traditional psychological therapy for improving adjustment, it is a useful intervention for the Australian context where access to, and interest in, conventional services is limited.

Coping with miscarriage: Australian women's experiences

Candidate: Ingrid Rowlands

Degree: PhD

University: School of Psychology, The University of Queensland

Supervisor: Professor Christina Lee (School of Psychology, The University of Queensland)

This thesis combines quantitative and qualitative methods to examine both women's psychological well-being after miscarriage and the specific coping strategies that are associated with coping well with this event. Longitudinal analyses using Surveys 1, 2 and 3 of the Younger cohort of the ALSWH showed that miscarriage negatively affected women's mental health and well-being. Women who reported miscarriage had greater stress, less optimism and poorer general mental health than women who had never miscarried. Because miscarriage had significant effects on women's mental health and well-being, the next part of the thesis was dedicated to examining the predictors of, and coping strategies related to, coping well after miscarriage. Using the ALSWH data, we examined the predictors of Mental Health among 998 young women reporting miscarriage. Higher education and satisfaction with the general practitioner were associated with better Mental Health. Stress and negative life events were associated with poor Mental Health, as was a history of medically diagnosed depression or anxiety.

In order to gain a more in-depth understanding of how women cope with miscarriage, nine Australian women who had experienced miscarriages in the previous two years were interviewed. While women's stories differed at a personal level, common themes were identified. Women described a complex and difficult range of emotions, including shock and disbelief; they talked about the process of searching for a cause for the miscarriage or an underlying meaning for the miscarriage; and they talked about the significant emotional, physical and social impact that the miscarriage had on their lives. However, acknowledgment of the miscarriage and support from families, health care providers and the community were positive and important for women when coping with miscarriage. Unfortunately, the medical management

of miscarriage was often described as poor, and a lack of information received, in combination with insensitive comments and lack of empathy while being treated in hospital, were very negative aspects of the women's miscarriage experiences.

Taking all the results into consideration, it appears that changes to social norms and attitudes regarding miscarriage may help women to cope with this challenging and distressing experience. Interventions to help women cope with miscarriage need to be grounded in an understanding of women's need for social and family support, and understanding from health professionals. Given the lack of psychological interventions for women who miscarry, effective interventions need to be designed and comprehensively evaluated, and future research in this area is warranted.

Publications from this thesis:

Rowlands, I., & Lee, C. (In press). "The silence was deafening": Social and health service support after miscarriage. *Journal of Reproductive and Infant Psychology*. Accepted January 2010.

*Rowlands, I., & Lee, C. (2010). Adjustment after miscarriage. Predicting positive mental health trajectories among young Australian women. *Psychology, Health and Medicine*, 15(1), 34-49.

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**Publications based on ALSWH data*

Nutritional influences in pregnancy and postpartum for women and their children

Candidate: Alexis Hure

Degree: PhD

University: School of Health Sciences, University of Newcastle

Supervisors: Associate Professor Clare Collins (School of Health Sciences, University of Newcastle) & Professor Roger Smith (School of Medicine and Public Health, University of Newcastle)

Maternal factors prior to conception and during pregnancy may influence the development of the metabolic, cardiovascular and endocrine systems of the offspring and subsequent disease pathogenesis. This thesis explores the concept of the developmental origins of health and disease.

Human observational research studies were undertaken to test the relationships amongst maternal dietary intake, weight gain during pregnancy and changes in biochemical markers between pregnancy and postpartum for the mother and infant. This thesis presents original research related to maternal and fetal nutrition, and empirical data concerning the methodological challenges faced when recruiting for research purposes.

An analysis of dietary intake data from the young cohort of the ALSWH was used to determine the overall diet quality in a contemporary cohort, and to assess whether those who are pregnant eat differently to those who are not. Only small differences in diet quality and nutrient intakes were detected between pregnancy groups, and diet quality scores were consistently low. When the intake data were compared to Australian recommendations it appears that many young women fail to reach key nutrient targets, including those set for folate, fibre, calcium, iron, potassium and vitamin E.

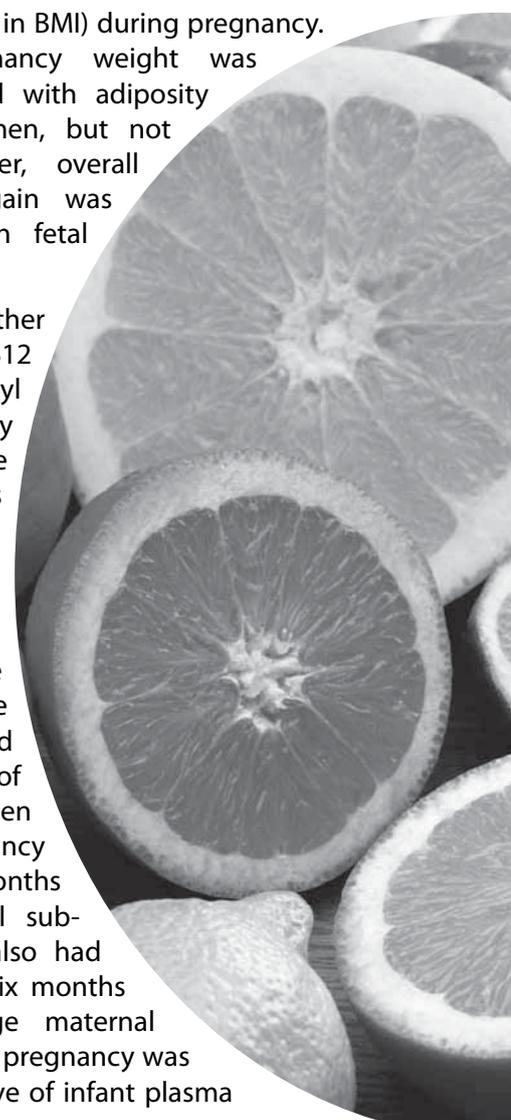
The research focus then shifted to prospective longitudinal data collection for women and their children during pregnancy and after birth. Low recruitment to this component of the studies threatened the potential to achieve the research aims. Rather than jeopardising the power of the investigations efforts were made to understand what had gone wrong and how the situation could be rectified.

An investigation of the relationship between fetal adiposity and maternal weight changes in pregnancy was performed. Pre-pregnancy body mass index (BMI) and weight changes during pregnancy were taken as broad markers of maternal nutritional status and energy regulation. Intrauterine growth, including the accumulation of adipose tissue, was assessed using serial ultrasounds. Fetal size was positively related to maternal pre-pregnancy weight (and BMI) and

weight gain (change in BMI) during pregnancy. Maternal pre-pregnancy weight was positively associated with adiposity at the fetal abdomen, but not the thigh. However, overall maternal weight gain was not associated with fetal adiposity.

To determine whether maternal vitamin B12 and folate (methyl donors) in pregnancy could influence the offspring's homocysteine metabolism at birth, changes in plasma vitamin B12, plasma folate and red cell folate were characterised for the cohort of more than 100 women during pregnancy and up to six months after birth. A small sub-sample of infants also had blood collected at six months postpartum. Average maternal plasma folate during pregnancy was significantly predictive of infant plasma homocysteine.

In conclusion, the research outlined herein demonstrates important interactions between the mother and her offspring during the critical windows of early development. The research is multidisciplinary in its application and contributes to our understanding of some of the nutritional influences in pregnancy and postpartum for women and their children.



Cardiovascular medication use and health-related Quality of Life in older women with diabetes

Candidate: Nur Hafidha Hikmayani

Degree: Master of Clinical Epidemiology

University: School of Medicine and Public Health, University of Newcastle

Supervisors: Dr Jane Robertson (School of Medicine and Public Health, University of Newcastle) & Ms Xenia Dolja-Gore (Research Centre for Gender, Health and Ageing, University of Newcastle)

Background. Diabetes patients are at high risk for cardiovascular disease. Evidence and guidelines recommending the use of multiple cardiovascular medications to support the management of diabetes have been well-established. It is nevertheless of growing concern that the benefits conferred by combination of the drugs are potentially offset by perceived deterioration on health-related quality of life (HRQoL) attributable to pill burden.

Objectives. A cross-sectional study was conducted to determine the extent of use of cardiovascular medications in elderly Australian women with diabetes—either individually or in combination—for primary and secondary prevention of cardiovascular disease. This study further examined whether usage patterns of cardiovascular medications have effects on their health-related quality of life.

Methods. A subset of the older cohort completing Survey 4 in the ALSWH who self-reported to have been diagnosed with diabetes and/or use medications indicative of diabetes were selected as study subjects. Use of cardiovascular medications was identified from self-reports on usage of medications belonging to the Anatomical Therapeutic Chemical (ATC) code B01AC (platelet aggregation inhibitors), C03 (diuretics), C07 (β -blockers), C08 (calcium channel blockers), C09 (agents acting on the renin-angiotensin system), C02 (other antihypertensives) and C10 (lipid modifying agents). Prevention stage of cardiovascular disease

was determined by presence of macrovascular disease identified from self-reports of having at least one of the following conditions: stroke, heart disease (angina, heart attack, other heart problems), had undergone or on waiting list for a heart surgery (heart bypass, angioplasty, angiography), or on any of cardiac drugs (ATC code C01) or warfarin (ATC code B01AA). Patterns of cardiovascular drug use were classified as no use, using any antihypertensives, lipid lowering agents or antiplatelet drugs, using any two combinations, and using all the three classes of medications. Quality of life was measured with the use of the SF-36, focusing on the physical functioning, general health, vitality and mental health subscales. Linear regression analyses of survey data evaluated the associations between usage patterns of cardiovascular medication and individual subscales of the SF-36 while controlling for other sociodemographic, health behaviour and health service utilisation characteristics.

Results. Of 7,158 older women retained at Survey 4, 885 were identified as having diabetes among which 390 (46.8%) had macrovascular disease. Twenty-three percent of the diabetic women used any one category of antihypertensives, lipid lowering drugs or antiplatelets, 37.5% reported use of a combination of any two and 29.1% were on all three categories of medicines. Using at least one cardiovascular drug was shown to be associated with higher HRQoL scores. After adjustment for other covariates, being

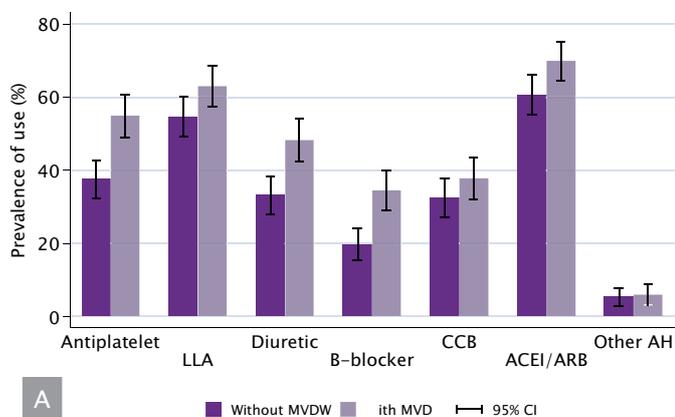


Figure 1. Cardiovascular medication use by presence of macrovascular disease. Panel A shows usage prevalence of antiplatelet, lipid lowering drug and antihypertensive classes. Panel B shows the overall pattern of cardiovascular drug use. Significant estimate differences between the two groups (with & without MVD) are indicated by non-overlapped 95% CIs. Abbreviations: LLA, lipid lowering agent; CCB, calcium channel blocker; ACEI, angiotensin converting enzyme inhibitor; ARB, angiotensin II receptor blocker; AH, antihypertensive; MVD, macrovascular disease; CI, confidence interval.

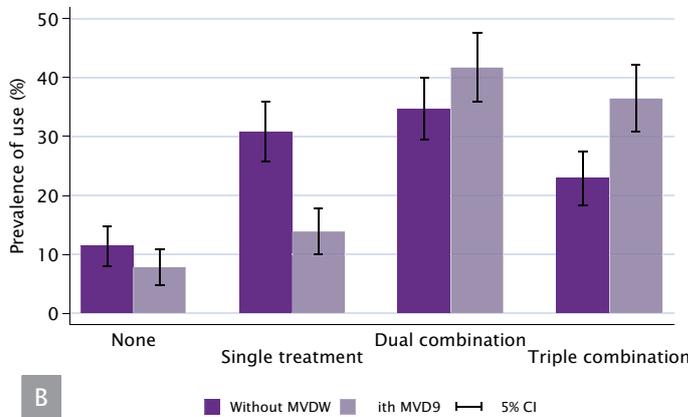
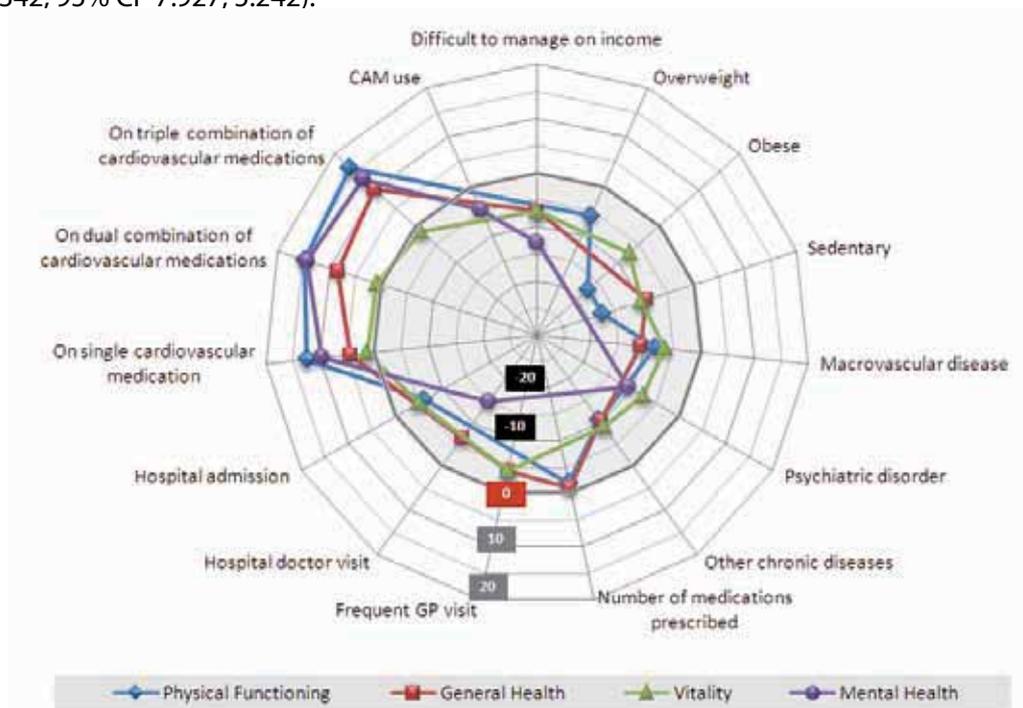


Figure 2. Radar chart of the quality of life models. Different markers connected with their corresponding lines represent regression coefficients of each QoL subscales. A coefficient of 0 means no associations between variables and QoL scores are found. Usages of cardiovascular medication are mostly shown to be subjectively beneficial as markers reside in outer area, while other covariates are shown to have negative effects on QoL indicated by markers sitting within grey area. Abbreviations: QoL, quality of life; CAM, complementary and alternative medicines; GP, general practitioner

on triple combination of cardiovascular drugs was significantly associated with increased scores on physical functioning (coefficient 16.134, 95% CI 6.940, 25.327), general health (10.058, 95% CI 2.649, 17.468) and mental health subscales (12.896, 95% CI 6.562, 15.882). Being on any dual combination was significantly associated with increased scores on physical functioning (coefficient 14.744, 95% CI 5.988, 23.501) and general health (8.334, 95% CI 1.200, 15.467), whereas using a single cardiovascular drug is only significantly associated with increased score on physical functioning (coefficient 12.346, 95% CI 3.943, 20.750). A negative association was found between using three cardiovascular drugs and vitality score albeit modest and statistically nonsignificant (coefficient -1.342, 95% CI -7.927, 5.242).

Conclusion. The use of cardiovascular medications in elderly Australian women with diabetes was reasonably high particularly for the secondary prevention of cardiovascular disease. Use of multiple cardiovascular drugs was demonstrated to be subjectively beneficial in terms of perceived physical functioning, general health and mental health. There remains a possibility that being on more intensive regimens with more cardiovascular drugs will diminish patients' HRQoL since the remaining subscales of the SF-36 were not evaluated. If HRQoL in diabetics is to be more comprehensively assessed, there may be value in employing a diabetes-specific instrument as an add-on to the generic HRQoL instrument.



Changes in young women's health behaviours in response to traumatic events

Candidate: Toni Lindsay

Degree: Master of Health Psychology

University: School of Behavioural Sciences, University of Newcastle

Supervisors: Dr Deborah Loxton (Research Centre for Gender, Health and Ageing, University of Newcastle) & A/Professor Jenny Bowman (School of Psychology, University of Newcastle)

Several studies have examined the role of specific types of trauma (E.g., sexual and physical trauma) on the behaviours of women, including their use of health behaviours such as smoking, alcohol and illicit drug use (Rheinhold et al., 2004, Chang, Skinner & Boehmer, 2001, Lang et al., 2003, Hapke et al., 2005 and Winfield et al., 1990). This study expanded these findings to examine the relationship between both major trauma and ongoing life events and the use of tobacco, risky drinking, illicit drug use, unhealthy eating behaviours, self harm and suicidal ideation in young women. The longitudinal mailed survey of 7675 women utilised

generalised estimating equations to examine these relationships, finding that following a major traumatic event/s women were significantly more likely to start using the above negative health behaviours. Women who had higher numbers of ongoing life events were also significantly more likely to start using negative health behaviours. This study, using the ALSWH data has been able to expand substantially on providing further knowledge about the ways in which women develop various types of health behaviours following traumatic and ongoing life events over time.

Marriage and cohabiting relationships: is there a difference?

Candidate: Nicole Arthur

Degree: PhD

University: School of Psychology, The University of Queensland

Supervisor: Professor Christina Lee (School of Psychology, The University of Queensland)

Social ties are integral to health and well-being, with marital relationship status being one of the most important predictors of health and well-being. Although contemporary research usually treats cohabiting relationships as equivalent to marriage, research suggests that significant differences in health and well-being may exist between married and cohabiting individuals. Because the majority of this research is cross-sectional, however, it is not clear whether pre-existing differences lead individuals to select marriage or cohabitation, or whether the differences arise from the nature of the relationships. Additionally, evidence suggests that differences exist between men and women in the health and well-being correlates of various relationship states.

If these two groups are meaningfully distinct then it is important that they are treated separately in research. If cohabiting relationships are different from marriages, or if different individuals move into them, this has relevance for both couple and individual therapy and in the prevention of relationship breakdown.

The ALSWH provides an opportunity to examine marriage and cohabitation longitudinally in a national sample of women. Women who were single at Survey 2 (N = 3868, aged 22-27) were divided into three groups – those who would still be single at Survey 3, those who would be married, and those who would be in cohabiting relationships. The study explores pre-

existing differences at Survey 2 in sociodemographic, physical health, health behaviours and psychological variables. It also explores whether differences exist on these same variables at Survey 3, and whether post-transition differences can be explained by pre-existing differences between the groups of women.

Using a selection of variables assessing sociodemographic status, health behaviours, physical health, and mental health, results suggest that there are both pre-existing differences between these three groups of women and differences that are apparent after the transition. Statistical adjustment for pre-existing differences attenuates, but does not completely remove, the post-transition differences. These findings suggest that both selection and social integration processes may be influential in determining women's relationship status and health and well-being.

The findings suggest that women who go on to cohabit are a meaningfully distinct group of individuals from those who marry, and thus need to be treated as a separate population. Increased recognition and understanding that pre-existing differences between women with different relationship status, as well as differences in social interaction processes within the relationship environments, may impact on the efficacy of individual and couple relationship therapy, and should be an important consideration in the delivery and structuring of effective treatment programs.

Long term health impacts of intimate partner violence on mid-aged Australian women.

Candidate: Karly Furber

Degree: Master of Clinical Epidemiology

University: School of Medicine and Public Health, University of Newcastle

Supervisors: Professor Catherine D'Este (School of Medicine and Public Health, University of Newcastle) & Dr Deborah Loxton (Research Centre for Gender, Health and Ageing, University of Newcastle)

Intimate Partner Violence (IPV) is associated with physical and psychological health problems. This study analysed mailed survey data collected from a large random sample of 9,826 mid-aged Australian women (aged 53-61 years old) who participate in the ALSWH. Logistic regressions were used to investigate the associations between timing of IPV (>11 years ago; 6-11 years ago; 0-5 years ago) and physical health diagnoses, physical health symptoms, depression, anxiety, other psychiatric diagnoses, panic attacks, health perceptions, stress, suicidal ideation and self harm; after adjusting for demographics and health behaviours.

Results indicate increased odds of having experienced IPV across all time periods, for many negative health outcomes: physical symptoms and diagnoses, negative general health perceptions, depression, anxiety, stress, and negative mental health perceptions. The results emphasize the association between IPV, even when it occurred over eleven years in the past, and poorer physical and psychological health outcomes. The results also show that for some variables, the length of time since IPV was experienced did not reduce the strength of the association. The results highlight the need for early IPV intervention and preventive education in the Australian population.

ENQUIRIES

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Data Archiving

The Australian Longitudinal Study on Women's Health has a policy to archive the ALSWH data with the Australian Social Sciences Data Archive (ASSDA) at the Australian National University on an annual basis. To date, data have been archived for Surveys 1, 2, 3 and 4 of the 1973-78 cohort and the 1921-26 cohort. Data from Surveys 1, 2, 3, 4 and 5 have been archived for the 1946-51 cohort.

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A detailed description of the background, aims, themes, methods, representativeness of the sample and progress of the study is given on the project web page. Copies of surveys 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.

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