




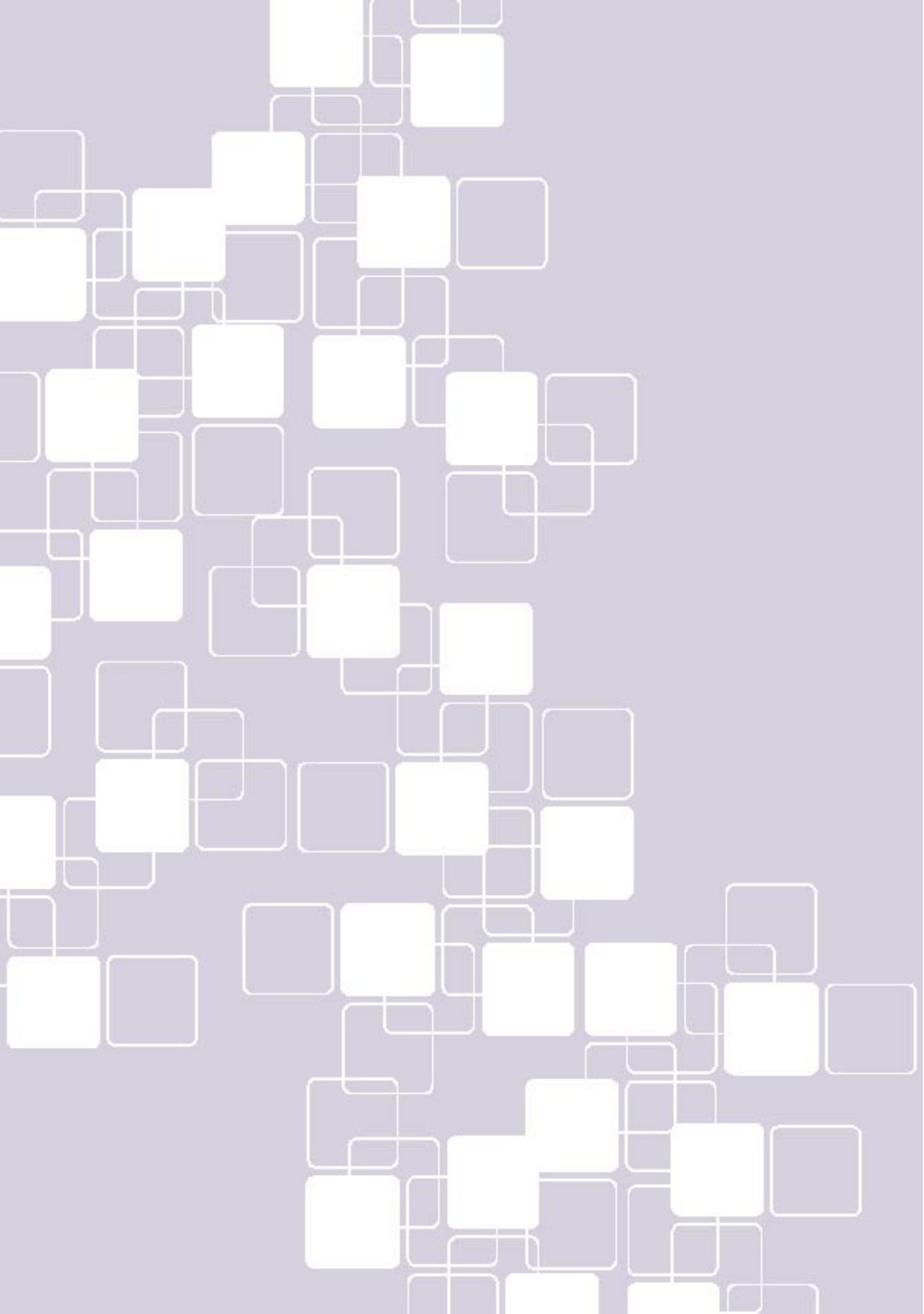
women's
health
australia

the australian longitudinal
study on women's health

Annual Report
2004

 *The* UNIVERSITY
of NEWCASTLE
AUSTRALIA

 THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA



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Director's Report

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*It has been another year
of steady
scientific
progress*

for the Australian Longitudinal Study on Women's Health. The Study, funded by the Australian Department of Health and Ageing with support from the Office for Women, is now in its ninth year. It involves about 40,000 women from three age cohorts, selected from the entire Australian population. Each cohort is to be followed for over twenty years, tracking changes in health and life circumstances as the women move through major life transitions. The information these women generously provide is used to produce an evidence base for the development and evaluation of policies that aim to better meet the needs of Australian women across three generations.

This year saw the start of the fourth round of surveys, with a major survey of the Mid-age cohort. These women were aged 45 to 50 when the study began and are now between 53 and 58, and experiencing the life events of middle age while planning for their futures in a changing Australian society.

Also this year we have prepared and piloted Survey 4 of the Older women, who will be aged between 79 and 84 when the main survey is conducted next year. In the midst of this we have also continued to analyse data from the first three Surveys of the Younger cohort, women who are now in their late 20s.

At the same time, we have been active in translating our findings into evidence for government to guide policy. This year we have prepared a number of reports on issues that are not only of policy relevance, but are of broader community concern. One of these covers women's consumption of alcohol and its relationship with health and wellbeing across the generations. We have also reported on demographic change and stability among middle-aged women, focusing particularly on their patterns of participation in the workforce and their plans for retirement. Violence against

women is an important issue affecting women's health. We have produced reports on domestic violence and the strategies that help women to move on from these violent situations, and the effects that violence and abuse of all kinds may have on women's reproductive health.

Other work has included several substudies, many of which focus on the needs of older women, dealing with falls and frailty, the needs of family caregivers, and the health care experiences of women with cardiovascular disease. Another substudy addresses the strategies that younger women use to cope with depression. We have continued to work on data quality and documentation, and to produce scientific papers and conference presentations on all aspects of women's health, from family planning to widowhood.

Our goal for the future is to continue to conduct world-class scientific research that addresses current policy needs for Australia, while also training a new generation of women's health researchers and at the same time striving to find some balance in our own lives. I am delighted at the funding announcement made in the 2004 Australian Government Budget, which has had a major impact on our ability to concentrate on work and planning.

I would like to take this opportunity to thank the women who give their time to participate in the project,

*without whom
none of this
activity
would be
possible.”*

Annette Dobson

Annette Dobson
Study Director



Investigators 2004



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Members of the University of Newcastle Staff



Members of the University of Queensland Staff

Feature : Nutrition, Alcohol and Tobacco.

How well do Australian women comply with dietary guidelines?

Collaboration with the Cancer Council of Victoria has enabled us to include their Food Frequency Questionnaire (FFQ) in Survey 3 of the Younger and Mid-age cohorts. This survey has been developed specifically for Australia, and assesses both the types of food consumed and the intake of specific micronutrients.

In analysing the Mid-age women's data, the aim was to compare reported intakes with guidelines developed by the NHMRC and the Australian Department of Health and Ageing. As Table 1 shows, compliance with guidelines was quite low. Only two women in the entire sample met all thirteen guidelines examined. Guidelines for meat consumption and for limiting "extra" foods (e.g. ice-cream, chocolate, cakes, potatoes, pizza, hamburgers and wine) were well met, but participants were least likely to meet recommendations for consumption of breads and cereal-based foods; milk, cheese and yoghurt; total and saturated fat; and iron.

Women in lower-status occupations and those who did not live with a partner and/or children were least likely to meet guidelines. Women who met few guidelines were also more likely to smoke, to have low levels of physical activity, and – for some guidelines at least – to be obese.

Although Australian diets have improved over recent decades, these findings suggest that Australian Mid-age women are still a long way from consuming diets considered optimal for health.

Table 1. Percentage of Mid-age women meeting each dietary guideline

	Guideline	% meeting guideline
1	Eat plenty of bread and cereals: at least four servings/day are recommended by The Australian Guide to Healthy Eating	12
2	Eat plenty of vegetables (including legumes): five or more servings daily	61
3	Eat plenty of fruit: two or more servings daily	58
4	Milk/yoghurt/cheese: two or more servings daily	32
5	Meat/fish/poultry/eggs/nuts/legumes: one or more servings daily	92
6	Extra foods: two-and-a-half or fewer servings daily	71
7	If you drink alcohol, limit your intake: two or fewer drinks daily	68
8	Eat a diet low in fat: <30% total energy	27
9	Eat a diet low in saturated fat: <10% total energy	18
10	Eat only a moderate amount of sugars and foods containing added sugars	59
11	Choose low-salt foods and use salt sparingly: <2300 mg sodium daily	62
12	Eat foods containing calcium: ≥800 mg daily	53
13	Eat foods containing iron: 12-16 mg daily	23



Footnote: This report is summarised from Ball K, Mishra GD, Thane CW & Hodge A. How well do Australian women comply with dietary guidelines? *Public Health Nutrition*, 2004; 7(3): 443-452.

A drink to your health: Alcohol consumption among Australian women

Research on alcohol consumption has tended to concentrate on men, but the Australian Longitudinal Study on Women's Health provides an opportunity to assess drinking patterns among women at different life stages.

Figures 1 and 2 present results across the three cohorts, showing the proportions of women who meet NHMRC criteria for different levels of long-term risk from alcohol consumption. The findings indicate that the great majority of Australian women are drinking at safe levels. However, short-term risk drinking (five or more standard drinks on a single occasion) is quite high among Younger women.

Figure 1. Long term risk drinking across the three cohorts of women.

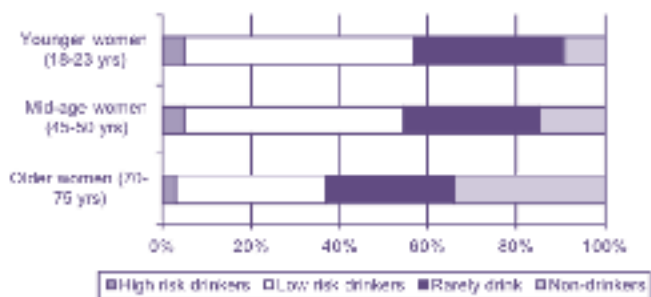
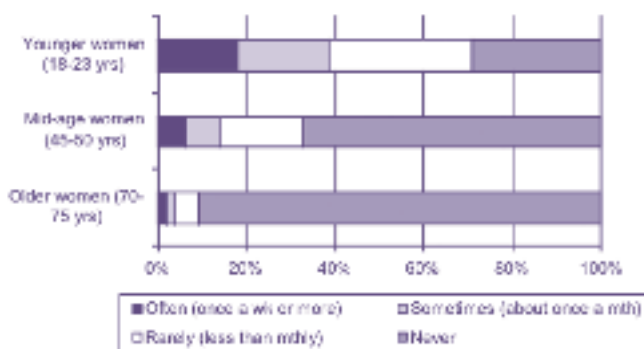


Figure 2. Short term risk drinking (having five or more drinks on one occasion) across the three cohorts of women.



Patterns of drinking differ across the age groups. Younger women tend to drink on fewer days each week, but are more likely to drink at risky levels (five or more drinks a day) on those days.



However, there is a pattern of change towards less risky drinking among this age group, which may be associated with movement into permanent relationships and with pregnancy and new motherhood. These factors will be examined in the next phase of this research.

The Mid-age and Older women's drinking patterns have changed little over three waves of the survey. The Mid-age women tend to drink on more days each week than the Younger women, but drink less each day. And although Older women are more likely to be non-drinkers than Younger or Mid-age women, more than 10% of the Older women drink every day. Older women who drink alcohol at low levels of risk tend to be in better physical and emotional health than non-drinkers.

Low-risk drinkers, in all age groups, tend to be women who :

- live in urban areas
- have higher education
- manage on their income without difficulty
- be in the healthy weight range
- have moderate or high levels of physical activity
- have been born in Australia or another English-speaking country
- have the best self-rated physical health

On the other hand, high-risk drinkers are more likely than other women their age to have poor mental health and to be current smokers. Among the Younger cohort, risky drinkers are also more likely to use illicit drugs, to have deliberately harmed themselves, and to have had multiple sexual partners, suggesting that risky drinking in this age cohort is part of a cluster of high-risk behaviours.

Footnote: The work described here was contained in a report to the Alcohol Substance Misuse & Injury Prevention Section of the Department of Health and Ageing: A. Young & J. Powers Australian Women and Alcohol Consumption. October 2004.

Young Women: Smoking and Life Changes

Young women represent a target group for the prevention of smoking uptake and for promoting smoking cessation. This analysis of data from Younger Surveys 1 and 2 explored changes in smoking behaviour among the young women as they related to four major life transitions: leaving home; employment and study; marriage; parenthood.

While 68% of the Younger women were not smoking at either Survey and 6% had given up smoking between Surveys, 19% continued to smoke and another 7% had started since Survey 1. The variable with the strongest association with starting smoking was frequent short-term-risk drinking (five or more drinks on one occasion), and those who had shown an increase in this type of drinking between surveys were by far the most likely to have started smoking.

The analysis also showed that smoking was strongly related to major life stage transitions among young women. Younger women were at increased risk of adopting smoking if they had moved out of the family home and were living independently. Smoking among young women appears part of a “partying” lifestyle of independent living with relatively few responsibilities.

On the other hand, marriage and – most strongly - pregnancy, were closely associated with quitting. Over 55% of those who had smoked at Survey 1 and had become pregnant between surveys had quit, compared with only 23% of other women who were smoking at Survey 1.

Women are highly motivated to stop smoking when they are pregnant, as the health of the baby is a central concern during pregnancy. But there is strong evidence that many return to smoking. In this analysis, being pregnant was the strongest predictor of stopping smoking. However, no longer being pregnant was the strongest predictor of re-starting to smoke. This suggests that at least some pregnant women who successfully give up smoking do not actually see themselves as “quitting smoking,” but as stopping for the duration of the pregnancy.

It is important to provide support to pregnant women to quit smoking as this is a time when they are highly motivated to do so. A continuing challenge is to help them to avoid re-starting smoking after the baby arrives.

Footnote: This report is summarised from McDermott LJ, Dobson AJ & Russell A. Changes in smoking behaviour among young women over life stage transitions. Australian and New Zealand Journal of Public Health, 2004; 28(4): 330-335.



Selected Projects 2004

The Big Picture: The Health and Well-being of Three Generations of Women in Rural and Remote Areas of Australia

Australia's rural communities have experienced profound economic and social changes over several decades. In understanding the health needs of rural women, it is important to understand how these changes have affected women at all stages of life.

Younger women's lives

Younger rural women are much more likely to marry early, have their children early, and to hold fewer post-school qualifications. Other factors that affect the health of younger women in rural areas are their somewhat higher rates of smoking and short term risk drinking.

Although the data show no differences in the physical health of younger women living in different areas, as measured by SF-36 scores, rates of hospitalisation and post-natal depression are higher in the country, reflecting earlier motherhood. Given their earlier marriage and motherhood, younger rural women are also more likely to need access to general practice and obstetric and gynaecological services, yet they report poorer access to most health services. In regard to continuity of care, young rural women's choices are limited by the number of local GPs, the lack of female GPs, and the relatively rapid turnover of GPs in rural and remote areas.

Mid-age women: time use and family relationships

About 30% of mid-age women, whether urban or rural, provide some level of family caregiving for someone who is elderly, frail or disabled. But at the same time, women living in rural and remote areas are far more likely to be providing childcare, mostly for grandchildren – 40% of rural and remote women, compared with 25% of urban women, provide this care. The 'sandwiching' of this generation of women, who are caring for both the older and the younger generation, is emphasised for women in country areas by the earlier marriage and motherhood of rural women, the disproportionate ageing of the rural population, and the relative lack of services such as nursing homes and childcare centres.

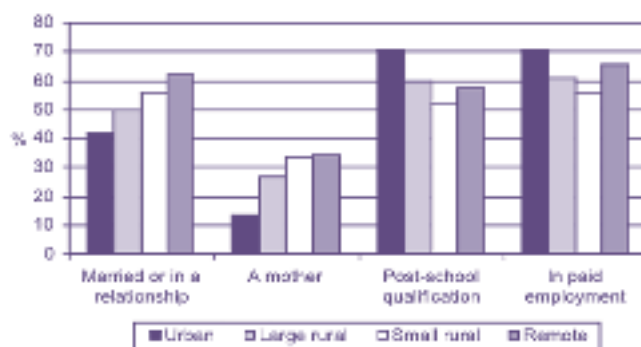


Older women: Caring and being cared for

Average age in the rural population is increasing faster than in other parts of Australia. This is occurring, in large part, because young people are moving away to larger centres in search of education or employment. However it raises issues for the older people who are left behind. The 'view from inside' is provided by an older rural woman who needed care but had no family support.

"I... believe we should have half-way houses respite care for single, in-patients to be looked after, after having weakening illnesses... it is very traumatic to feel abandoned like I did when I had a stroke three and a half years ago, and went home and became depressed through weakness and aloneness."

Figure 3. Relationships, motherhood, educational qualifications, and employment status of Younger women at Survey 2.



Footnote: This report is summarised from Warner-Smith P, Bryson L & Byles J. The Big Picture: The Health and Well-being of Three Generations of Women in Rural and Remote Areas. Health Sociology Review, 2004; 13(1).

Who Do You Turn To? Women, GPs and Emotional Distress

In times of emotional distress, access to appropriate professional support can make the difference between successful resolution and the development of chronic problems. A survey of Mid-age participants living in NSW, who had experienced emotional distress, showed that 52% of them had discussed their problem with a GP, and that both the responses from GPs, and the women's satisfaction were extremely variable.

Participants reported that "Listening" was the most common response from GPs (68%), followed by prescription medication (55%), referral to specialist care (13%) and – rarely – specific interventions such as counselling (4%) or relaxation therapy (1%). There was a relatively high degree of satisfaction with referral, counselling and relaxation therapy among those who received these treatments. By contrast, women who received a prescription or were simply "listened to" were likely to find these less satisfactory.

Women regarded GPs who listened and provided referrals as taking their problems seriously, while those who simply prescribed medication were viewed as unhelpful. Time spent in consultation had the biggest impact on satisfaction:

"(They) just want to shove you in and shove you out – like a sausage maker."

A few women reported positive experiences of taking prescribed drugs:

"I don't know how I would have coped without them."

Others were more ambivalent:

"I don't like tablets but [medication] helps me get through the day...has helped straighten out the jumble."

However, most had very negative perceptions of psychotropic medicines, which they regarded as covering up problems instead of curing them:

"I took them for three or four months. ...flushed them down the toilet. It dulls the pain but doesn't solve the problem. In some ways it was worse, you knew in the back of your mind it was counterproductive and you had to solve it."

Those in rural areas voiced more discontent with professional help, particularly GPs, than urban women did, citing a fear of lack of confidentiality, lack of privacy, and a sense of stigma. Practical barriers were also mentioned. Rural women explained that they had less choice of GPs, and described the time and distance involved in accessing mental health professionals.

"The one time I did want to go, no one was available. I live in a small town. A private counsellor costs \$75 per hour. I can't afford that. I'm not a person to run to the doctor. No one in our family does, but if you've got something you need them."

Footnote: This report is summarised from Outram S, Murphy B & Cockburn J. The role of general practitioners in treating psychological distress: A study of midlife Australian women. *Journal of Family Practice*, 2004; 21(3): 276-281.





Middle Age: Change and Stability Among Urban and Rural Women

Middle-aged women are of growing policy interest because of Australia's projected demographic changes. They have been in the vanguard of a trend towards smaller families and longer life expectancy, and they have experienced changes in public and private expectations of women's roles. How these women's lives are changing as they move through their 50s, and what may lie ahead for this group, is of growing importance.

While middle age is generally a time of stability, a large minority of women are undergoing significant changes that are likely to impact on their lives in older age.

These include:

- High rates of marriage dissolution and very low rates of re-partnering, meaning that as many as 25% of women will reach old age alone
- An overall increase in hours of paid work, as those with paid work move to longer working weeks
- An increase in the proportion with private health insurance

There are also important urban-rural differences in the lives and transitions of middle-aged women, that will have implications as they age. Middle-aged women in more rural and remote areas are characterised by:

- Lower rates of divorce
- More workforce involvement and longer hours of paid work
- Lower proportion with children still living at home
- Higher level of family caregiving for the frail or disabled
- Higher levels of caring for grandchildren
- Higher likelihood of supporting a family member who is living away from home, usually a child who is studying in a city location
- Greater involvement in unpaid voluntary work

This is the first generation of women for whom paid work outside the home has been normative, even for women with ongoing family commitments. Important findings include:

- Physical and mental health are better among those with paid work, regardless of whether work is part-time, full-time or longer than 40 hours per week
- Among those with paid work, the women working longer hours have better physical health
- Those without paid work are higher users of health services
- While physical health is declining generally among middle-aged women, this is particularly marked for women who have no paid work or who move out of the workforce.
- By contrast, mental health is tending to improve over the years, and this is particularly marked for women working full time

“Stay strong, and never accept it as a way of life.”

Australian women’s experiences of abuse and life after abuse

The prevalence of abuse and violence against women in Australian society, and the negative impact on women’s health and well-being, are well established. The Australian Longitudinal Study on Women’s Health continues to document the extent and consequences of this major health problem. While the need for education and prevention continues to be evident, we also focus on the health of women who are abused, and on strategies and resources that these women have used to recover from abuse and carry on with their lives.

Abuse adversely affects women’s general and reproductive health.

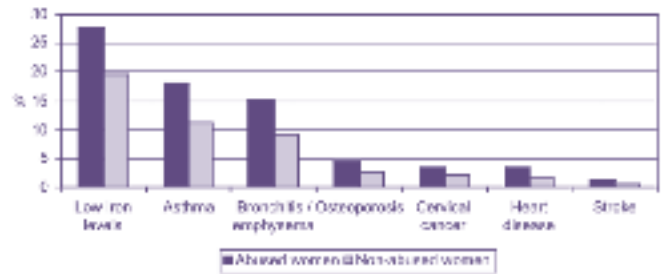
A comparison of Mid-age women with and without a history of abuse shows a clear picture of poorer functioning in all areas of health and well-being (see Figure 4). Women with any history of abuse:

- have poorer physical and emotional health
- are higher users of all types of health services
- have higher rates of surgery
- are twice as likely to have received a psychiatric diagnosis
- are twice as likely to use medication for sleep, for depression, and for nerves
- are several times as likely to have had a miscarriage or pregnancy termination

Women with a history of abuse are much more likely to be divorced or separated, to have trouble managing financially, and to have lower levels of education, but even after taking these disadvantages into account, the health differences still remain.

Women from rural and remote areas may have particular problems in dealing with abuse. For these women, help-seeking is inhibited by isolation, by a lack of knowledge of what services are available, and by long distances.

Figure 4. Diagnosed medical conditions among Mid-age women with and without a history of abuse



Life after abuse: How do some women manage to move on?

Women’s own voices were used to explore ways in which they have managed to overcome violent and abusive situations. A sample of 143 women who had experienced abuse in an adult relationship answered open-ended questions about their experiences. Understanding the experiences of these women may help develop strategies to help others move on from abusive experiences.

How did they cope?

Inner strength was a common theme for many women; they spoke of facing the challenges posed by abusive situations with determination and persistence:

“Stay strong, and never accept it (the abuse) as a way of life.”

They also described active measures they had taken to bolster the psychological resources they had available to them. Thus women spoke of working to rebuild their self-confidence through self-affirmation:

“Just keep telling myself that I am a good person”

or through new challenges:

“Work. Got a job this helped self esteem”.



At the same time, many were placing a new emphasis on the importance of positive relationships with loved ones:

“The importance of spending as much time with people who love me and see me for who and what I am – my children, their partners, my granddaughter, loving them and laughing with them”

as well as enjoying life to the full:

“Life’s too short. Enjoy or try to – every minute... Stand up for yourself and believe in yourself.”

Another common theme was the issue of speaking out: being open about what had occurred, and seeking support if necessary.

“Talk with friends, family, counsellors, bring it out in the open if possible.”

When asked what advice they would give other women in abusive situations, the most common advice was to leave:

“Leave and don’t blame yourself for being abused. Abusers have to blame someone for their actions so they always blame the one they abuse.”

“Try to be strong. Think about what is the best way to tackle it to protect you and your children from further harm. Get a job. Earn money to support you and your children.”

Social support from professional and informal sources, and practical planning for the future, were considered critical:

“Get counselling assistance to get clearer about what is happening to them and the factors that are causing them to be in that situation, ie insight, clarity and determine options.”

“Make sure you have a support set up – friends, family, money, place to live, plans for the future.”

Once they had made the first step, these abused women spoke of the need for support and time to recover:

“Need love, lots of friends – give themselves lots of time – and do not rush into another relationship – grow up first!”

“Even though you know you have to get out it can still be traumatic. Don’t be talked into going back. Every time they try to get you back write a list of the reasons you left.”

What services would have helped?

We also took the opportunity to ask these women what services they would have found helpful. The responses were varied, but emphasised counselling, community education and awareness campaigns, and providing practical support and protection to allow them to rebuild their lives. Respondents repeatedly emphasised that the services should be appropriate and practical, and should lead towards self-sufficiency and independence:

“Must be offering confidentiality, safety and non-judgemental teaching programmes for the victim, and be willing to address legally the perpetrators of abuse.”

“More refuges and support services – more safe houses. Support services that offer practical help – money, shelter, job if possible (if the person is not minding small children), help in relocating, better police protection.”

These suggestions, with their emphasis on practical support and assistance to deal with the trauma and to develop a new life, indicate a strong commitment to surviving and recovering from abuse. These women do not see themselves solely as victims, or as people who have been irreparably damaged by their experiences, but as women who intend to rebuild their lives and who deserve practical support while they do it.

Footnote: The work described here was contained in a report to the Office of the Status of Women: G Parker, D. Loxton, A. Svensson, C. Lee, P. Warner-Smith & A. Young "Stay strong, and never accept it as a way of life." Australian Women's Experiences of Abuse and Life After Abuse. May 2004.

Baby Boomers Consider Retirement

As the Mid-age cohort of the Australian Longitudinal Study on Women's Health moves through their 50s, at least some of the women are beginning to think about their own and their partners' retirement. The ageing of this cohort of Australians raises particular policy issues, in the context of demographic and social changes: Australians are now living longer and are likely to have higher expectations for living standards in older age, but there are questions about the sustainability of present welfare systems.

Survey 4 of the Mid-age cohort, which was conducted during 2004, is the first of the surveys to include questions on retirement and retirement planning. Findings are not yet available from the full data set, but we have results from a small pilot survey, conducted in 2003 to check the content and layout of the main survey. With a sample of only 280 women from a small area, the findings are only indicative, but are of considerable interest.

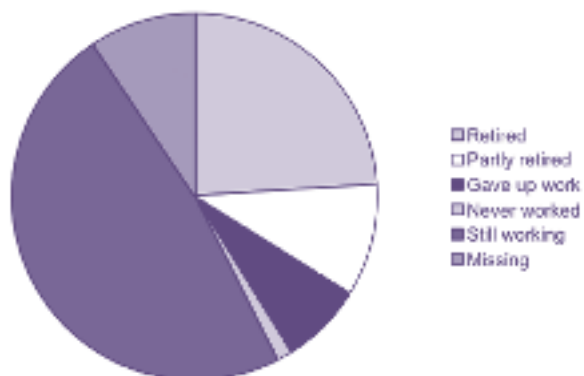
Figure 5 shows that in this pilot survey, when the participants were aged 53 to 58, about 25% described themselves as 'retired', and a further 10% as 'partly retired'. Just under 50% were in the paid workforce, on a full- or part-time basis. Fewer than 2% had never had a paid job. For this generation of women, paid work at some stage of adult life is normal, although most have not had the uninterrupted full-time employment trajectory of the traditionally "male" career.

It is interesting that 7% define themselves as having given up paid work but not as "retired". These women may have given up paid work for motherhood, family caregiving, or other unpaid family roles, but would not think of themselves as "retired". Another 9% did not respond to this question at all, a much higher rate of missing data than is usual in this age cohort. For many women in this age group, formal "retirement" may be a concept that has little relevance to their lives.

Asked about when they expected to, and would like to, retire, almost a third said they didn't know. This suggests – somewhat surprisingly – that retirement is a concept that many women in their mid 50s have not yet actively considered.

Footnote: The work described here was contained in a report to the Ageing Division of the Department of Health and Ageing: J. Ford, C. Lee, A. Svensson & P. Warner-Smith. Paid Work, Time Use, Demographics and Health: Analyses from the Mid-Age Cohort of the Australian Longitudinal Study on Women's Health. December 2004.

Figure 5. Retirement status from the Mid-age Survey 4 pilot sample.



Respondents were also asked about various factors that might be important to them in deciding when they might retire. The most frequently endorsed items were problems with their own health, financial security, a need to provide family caregiving, and a wish for lifestyle change. Availability of superannuation and job-related issues were seen as moderately important; but other financial factors, such as becoming eligible for a pension or other benefits, seemed to be regarded as relatively unimportant.

The data suggest that Mid-age women are generally not making serious plans about retirement. Given that women generally have low levels of superannuation and private saving, and that about a quarter of women of retirement age are unpartnered, this raises worrying issues for the financial security of many baby boomer women in old age.



Publications 2004

Grove N, Brough M, Canuto C & Dobson A.
Aboriginal and Torres Strait Islander health research and the conduct of longitudinal studies; issues for debate.

Australian and New Zealand Journal of Public Health, 2003; 27(6): 637-641.

The National Health and Medical Research Council, Research Agenda Working Group (RAWG) and the literature on Indigenous health have identified the need to fill gaps in descriptive data on Aboriginal and Torres Strait Islander health and noted both the lack of research with urban populations and the need for longitudinal studies. This paper presents some of the broad ethical and methodological challenges associated with longitudinal research in Indigenous health and focuses particularly on national studies and studies in urban areas. Our goal is to advance debate in the public health arena about the application of ethical guidelines and the conduct of longitudinal studies in Aboriginal and Torres Strait Islander communities. We encourage others to offer their experiences in this field.

Powers JR, Young AF, Russell A & Pachana NA.
Implications of non-response of older women to a short form of the Center for Epidemiologic Studies Depression Scale.

International Journal of Aging and Human Development, 2003; 57(1): 37-54.

The Center for Epidemiologic Studies Depression Scale (CES-D) is frequently used in epidemiological surveys to screen for depression, especially among older adults. This article addresses the problem of non-completion of a short form of the CES-D (CESD-10) in a mailed survey of women aged 73- to 78-year-old women enrolled in the Australian Longitudinal Study on Women's Health. Completers of the CESD-10 had more education, found it easier to manage on available income and reported better physical and mental health. The Medical Outcomes Study Short Form Health Survey (SF-36) scores for non completers were intermediate between those for women classified as depressed and not depressed using the CESD-10. Indicators of depression had an inverted U-shaped relationship with the number of missing CESD-10 items and were most frequent for women with two to seven items missing.

Future research should pay particular attention to the level of missing data in depression scales and report its potential impact on estimates of depression.

Cartwright S & Warner-Smith P.
'Melt down': Young women's talk of time and its implications for health, well-being and identity in late modernity.

Annals of Leisure Research, 2003; 6(4): 319-338.

There is considerable evidence that increased levels of consumption, 'time-pressure' (Gunthorpe and Lyons, forthcoming) and transitory employment in the current 'post-industrial' or 'late-modern' society (Bauman, 2001), have implications for health, well-being and leisure (Green, 1998; Lehto, 1998; Robinson and Godbey, 1998; Brown, et al., 2001). In this paper we focus on the leisure experiences of young women, with specific attention to issues that link women's leisure, identity, health and well-being in the context of late modernity. Data are drawn from the Australian Longitudinal Study on Women's Health (ALSWH – also known as Women's Health Australia). Pointing to differences between modernity and late modernity, with particular attention to quantity and quality of leisure, are narratives about time fragmentation, stress and illness and the importance of locating "the balance" in young women's lives. The narratives emerged from focus group discussions with young women aged 18 – 23 years and call into question young women's time use and the implications for health and well-being.

Guillemin M.
Understanding illness: Using drawings as research method.

Qualitative Health Research, 2004; 14(2): 272-289.

Until recently, the use of visual methodologies was restricted to the use of photographic studies in anthropological research. In the last decade, visual methodologies are becoming more evident in social research. These methodologies encompass various visual media, including film, video, still photography, electronic visual media,

and material artefacts. In this article, I examine the use of drawings as a research tool and suggest it is most effectively used as an adjunct to other social research methods. Using examples from two studies, I illustrate how drawings can be used to explore the ways that people understand illness conditions. Drawings are both visual products and processes of meaning making. I argue that the act of drawing necessitates knowledge production, with a visual product as its outcome. Although the examples presented in this article are limited to illness conditions, I argue that drawings offer a rich and insightful research method to explore how people make sense of their world.

Lee C, Mishra G & Kuh D.

Country of birth, country of residence, and menopausal transitions and symptoms: British Birth Cohort and Australian Longitudinal Study on Women's Health.

Australian and New Zealand Journal of Public Health, 2004; 28(2): 144-151.

Objective: To explore endocrine-related and general symptoms among three groups of middle-aged women defined by country of birth and country of residence, in the context of debates about biological, cultural and other factors in menopause.

Methods: British-born women participating in a British birth cohort study (n=1,362) and age-matched Australian-born (n=1,724) and British-born (n=233) Australian women selected from the Australian Longitudinal Study on Women's Health (ALSWH) responded to two waves of surveys at ages 48 and 50.

Results: Australian-Australian and British-Australian women report reaching menopause far later than British-British women, even after accounting for smoking status and parity. Hormone replacement therapy (HRT) use was lower and hysterectomy was more common among both Australian groups, probably reflecting differences in health services between Britain and Australia. The Australian-Australian and British-Australian groups were more likely to report endocrine-related symptoms than the British-British group, even after adjusting for menopausal status. British-British women were more likely to report some general symptoms.

Conclusions: Symptom reporting is high among Australian and British midlife women and varies by country of residence, country of birth and menopausal status.

Implications: The data do not support either a simple cultural or a simple biological explanation for differences in menopause experience.

Guillemin M.

Embodying heart disease through drawings.

Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine, 2004; 8(2): 223-239.

This article examines how women with reported heart disease experience and understand their condition. The participants comprised thirty two women, aged 49-54 years, from the mid age cohort of the Australian Longitudinal Study on Women's Health who self reported to have heart disease. Following individual interviews, each participant was asked to draw her heart disease. The article focuses on the analysis of the drawings of heart disease produced by the women. The drawings were analysed into three themes: first, the heart at the centre, second, the heart in the lived body and finally, heart disease as a social illness. The drawings are considered both as visual products of women's knowledge about heart disease and also as processes of embodied knowledge production. The use of drawings is an interesting and insightful method with which to explore understandings of illness.

Outram S, Murphy B & Cockburn J.

Factors associated with accessing professional help for psychological distress in midlife Australian women.

Journal of Mental Health, 2004; 13(2): 185-195.

Background: Given the high prevalence of mental health problems in midlife women it is important to understand the factors that motivate and inhibit seeking professional help.

Objective: To identify factors associated with and barriers to seeking professional help for psychological distress amongst a sample of 322 midlife Australian women.

Method: Qualitative and quantitative data were gathered using semi-structured telephone interviews in NSW Australia.

Results: Seeking help from a GP was associated with poorer mental ($p=0.002$) and physical health scores ($p=0.005$). Seeking help from a mental health professional was associated with being out of paid employment ($p=0.035$), being mostly able to talk about one's deepest problems as opposed to sometimes or hardly ever ($p=0.015$), being dissatisfied with family relationships ($p=0.008$), and feeling understood by family/friends sometimes as opposed to mostly ($p=0.002$). Women's major barriers to seeking help were thinking they should cope alone (64%); thinking the problem would get better by itself (43%); embarrassment (35%); believing no help available (34%); not knowing where to go for help (30%); and fear of what others might think (28%). Qualitative data also highlighted attitudinal barriers to help-seeking.

Conclusions: Attitudinal barriers need to be addressed to enable midlife women to more easily seek and access mental health care when needed.

Warner-Smith P, Bryson L & Byles J.

The big picture: The health and well-being of three generations of women in rural and remote areas.

Health Sociology Review, 2004; 13(1).

For at least the last three decades, Australia has been experiencing profound economic and social changes which, it is argued, have resulted in a widening gap in health opportunities and outcomes between urban and rural areas. There are important health policy implications associated with these socio-cultural and demographic changes, and they are particularly relevant to women, who are greater users of the health care system, both as patients and carers, than are men. This paper draws on findings from the Australian Longitudinal Study on Women's Health (ALSWH), a 20 year study of the health of 40,000 Australian women, to paint an overview of rural women's health and well-being in three age cohorts, including consideration of the divergent life course patterns among women and issues of inequality and inequity between rural and urban populations. The data presented here suggest that there is a need to integrate a thoroughly gendered approach not only into all analyses of spatial inequality but also the analysis of the distribution of and access to services.

Guillemin M.

Heart disease and mid-age women: Focusing on gender and age.

Health Sociology Review, 2004; 13(1).

This paper explores the experiences of Australian mid-age women with reported heart disease with specific reference to gender and age. This is a collaborative study with the Australian Longitudinal Study on Women's Health. The heart disease study focused on the mid-age cohort of 14,011 women, of whom 2.3% (319) reported having been told by a doctor that they had heart disease. The methods comprised 1) a national questionnaire survey about women's experiences of heart disease; and 2) in-depth interviews with women with reported heart disease. The paper focuses on the reported problems of delayed diagnosis of the women with heart disease, in particular those women presenting with heart attacks. Most women in this age group considered heart disease to be a gendered disease, primarily a disease of men. This research points to the importance of exploring understandings of illness and its impact on health care practice.

Mishra GD, Ball K, Dobson AJ & Byles JE.

Do socio-economic gradients in women's health widen over time or with age?

Social Science and Medicine, 2004; 58(9): 1585-1595.

A population-based study was conducted to investigate changes over time in women's well-being and health service use by socio-economic status and whether these varied by age. Data from 12,328 mid-age women (aged 45–50 years in 1996) and 10,430 older women (aged 70–75 years) from the Australian Longitudinal Study on Women's Health were analysed. The main outcome measures were changes in the eight dimensions of the Short Form General Health Survey (SF-36) adjusted for baseline scores, lifestyle and behavioural factors; health care utilisation at Survey 2; and rate of deaths (older cohort only). Cross-sectional analyses showed clear socioeconomic differentials in well-being for both cohorts. Differential changes in health across tertiles of socioeconomic status (SES) were more evident in the mid-age cohort than in the older cohort. For the mid-aged women in the low SES tertile, declines in physical functioning (adjusted mean change of -2.4, standard error (SE) 1.1) and general health perceptions (-1.5,

SE 1.1) were larger than the high SES group (physical functioning -0.8 SE 1.1, general health perceptions -0.8 SE 1.2). In the older cohort, changes in SF-36 scores over time were similar for all SES groups but women in the high SES group had lower death rates than women in the low SES group (relative risk: 0.79, 95% confidence interval 0.64–0.98). Findings suggest that SES differentials in physical health seem to widen during women's mid-adult years but narrow in older age. Nevertheless, SES remains an important predictor of health, health service use and mortality in older Australian women.

Ball K, Mishra GD, Thane CW & Hodge A.
How well do Australian women comply with dietary guidelines?

Public Health Nutrition, 2004; 7(3): 443-452.

Objective: To investigate the proportion of middle-aged Australian women meeting national dietary recommendations and its variation according to selected sociodemographic and behavioural characteristics.

Design: This cross-sectional population-based study used a food-frequency questionnaire to investigate dietary patterns and compliance with 13 commonly promoted dietary guidelines among a cohort of middle-aged women participating in the Australian Longitudinal Study on Women's Health.

Setting: Nation-wide community-based survey.

Subjects: A total of 10561 women aged 50-55 years at the time of the survey in 2001.

Results: Only about one-third of women complied with more than half of the guidelines, and only two women in the entire sample met all 13 guidelines examined. While guidelines for meat/fish/poultry/eggs/nuts/legumes and 'extra' foods (e.g. ice cream, chocolate, cakes, potatoes, pizza, hamburgers and wine) were met well, large percentages of women (68-88%) did not meet guidelines relating to consumption of breads, cereal-based foods and dairy products, and intakes of total and saturated fat and iron. Women working in lower socio-economic status occupations, and women living alone or with people other than a partner and/or children, were at significantly increased risk of not meeting guidelines.

Conclusions: The present results indicate that a large proportion of middle-aged Australian women are not meeting dietary guidelines. Without substantial changes in their diets, and help in making these changes, current national guidelines appear unachievable for many women.

Ball K, Crawford D & Kenardy J.

Longitudinal relationships among overweight, life satisfaction and aspirations in young women.

Obesity Research, 2004; 12(6): 1019-1030.

Objective: This study investigated associations of overweight status and changes in overweight status over time with life satisfaction and future aspirations among a community sample of young women.

Research Methods and Procedures: A total of 7865 young women, initially 18 to 23 years of age, completed two surveys that were 4 years apart. These women provided data on their future life aspirations in the areas of further education, work/career, marital status, and children, as well as their satisfaction with achievements to date in a number of life domains. Women reported their height and weight and their sociodemographic characteristics, including current socioeconomic status (occupation).

Results: Young women's aspirations were cross-sectionally related to BMI category, such that obese women were less likely to aspire to further education, although this relationship seemed explained largely by current occupation. Even after adjusting for current occupation, young women who were obese were more dissatisfied with work/career/study, family relationships, partner relationships, and social activities.

Weight status was also longitudinally associated with aspirations and life satisfaction. Women who were overweight or obese at both surveys were more likely than other women to aspire to "other" types of employment (including self-employed and unpaid work in the home) as opposed to full-time employment. They were also less likely to be satisfied with study or partner relationships. Women who resolved their overweight/obesity status were more likely to aspire to being childless than other women.

Discussion: These results suggest that being overweight/obese may have a lasting effect on young women's life satisfaction and their future life aspirations.

Powers JR, Goodger B & Byles JE.
Assessment of the abbreviated Duke Social Support Index in a cohort of older Australian women.

Australasian Journal on Ageing, 2004; 23(2): 71-76.

Objectives: To assess the acceptability, reliability and validity of the 11-item Duke Social Support Index (DSSI) in community-dwelling older Australian women and to describe its relationship with the women's socio-demographic and health characteristics.

Method: Women aged 70-75 years were randomly selected from the national Medicare database, with over-sampling of rural and remote areas. The mailed survey included items about social support, Medical Outcomes Study Short Form Health Survey (SF-36), health service use, recent life events and socio-demographics.

Results: All DSSI items were completed by 94% of the 12,939 participants. Internal reliability was reasonable for ten of the 11 DSSI items and its factors, social interaction (4 items) and satisfaction with social support (6 items; Cronbach's alpha of 0.8, 0.6, 0.8). The factor structure was consistent for subgroups of women: urban/non-urban; English speaking/non-English speaking background; married/widowed. Summed scores were highly correlated with factor scores and showed good construct validity. Higher social support was associated with better physical and mental health, being Australian born, more educated and better able to manage on income.

Conclusion: Ten of the 11 DSSI items provided an acceptable, brief and valid measure of social support for use in mailed surveys to community-dwelling older women.

Schofield MJ & Mishra GD.

Three year health outcomes among older women at risk of elder abuse: Women's Health Australia.

Quality of Life Research, 2004; 13(6): 1043-1052.

Background: Older women are at increasing risk of various forms of familial violence, yet detection is poor and very little is known of the long-term health effects of this psychosocial problem. The effectiveness of the 'Vulnerability to Abuse' Screening Scale (VASS) in predicting three year health outcomes was investigated among women enrolled in the Australian Longitudinal Study on Women's Health, now known as Women's Health Australia.

Methods: The sample comprised a cohort of 10,421 women aged 73-78 who completed the 1996 and 1999 postal surveys (attrition rate 19.5%). The Time 2 sample had a small bias towards lower risk for elder abuse at Time 1 and better health on SF-36 and self-rated health. The VASS is a 12-item self-report measure with 4 factors: vulnerability, coercion, dependence and dejection.

Results: Overall, physical health (PCS) declined while mental health (MCS) increased over the three year period. Decline in physical health was predicted by only the dejection factor, but not by factors which seem to more directly measure abuse. The predictive validity of the VASS for three year mental health outcomes was given partial support. Three of the four VASS factors (dejection, vulnerability, and coercion) predicted decline in mental health at the univariate level, however, after adjusting for confounders, only one VASS factor (dejection) independently predicted decline in mental health.

Conclusions: While the VASS shows some promise as a marker of health risk in older women, only the dejection factor proved consistently predictive of declining health status. Further research is needed to determine longer term predictive validity of the scale and to gain a clearer picture of how abusive experiences impact on older women's health.

McDermott LJ, Dobson AJ & Russell A.
Changes in smoking behaviour among young women over life stage transitions.
Australian and New Zealand Journal of Public Health, 2004; 28(4): 330-335.

Objective: To examine changes in smoking behaviour among young women over four life stages: leaving home; employment, or attending college or university; marriage; and parenthood.

Methods: Young women participating in the Australian Longitudinal Study on Women's Health completed postal questionnaires in 1996 and 2000.

Results: Unmarried women who moved out of their parents' home between 1996 and 2000 had higher odds of adopting smoking than those who had not lived with their parents at either time (OR 1.8, 95% CI 1.2-2.6). Married women had lower odds of re-starting to smoke after quitting (OR 0.4, 95% CI 0.2-0.7) than unmarried women. Women who were pregnant in 2000 had higher odds of quitting smoking (OR 3.8, 95% CI 2.5-5.6) and women who were pregnant in 1996 and not in 2000 had higher odds of starting to smoke again (OR 3.2, 95% CI 1.6-6.2) than women who were not pregnant. The odds of being a current smoker or adopting smoking were significantly greater for women who binge drank alcohol or used cannabis and other illicit drugs.

Conclusions: Adoption, maintenance and cessation of smoking among young women is strongly related to major life stage transitions, illicit drug use and alcohol consumption.

Implications: Life changes such as marriage and actual or contemplated pregnancy provide opportunities for targeted interventions to help women quit smoking and not relapse after having a baby. Legislation to control smoking on licensed premises would reduce the social pressure on women to smoke.

Taft A, Watson L & Lee C.
Violence against young Australian women and associated reproductive health outcomes: A cross sectional analysis.
Australian and New Zealand Journal of Public Health, 2004; 28(4): 324-329.

Objective: This study aimed to investigate the associations between violence and younger women's reproductive health using the Survey 1 (1996) data of the Younger cohort of the Australian Longitudinal Study of Women's Health (ALSWH).

Methods: Multinomial regression, using composite variables for both violence and reproductive outcomes, adjusting for socio-economic variables and weighted for rural and remote areas.

Results: 23.8% of 14,784 women aged 18 to 23 years reported violence; 12.6% reported non-partner violence in the previous year; and 11.2% reported ever having had a violent relationship with a partner. Of the latter group, 43% (4.8% overall) also reported violence in the past year. Compared with women reporting no violence, women reporting partner but not recent violence (OR 2.55, 95% CI 2.10-3.09) or partner and recent violence (OR 3.96, 95% CI 3.18-4.93) were significantly more likely to have had one or more pregnancies. Conversely, having had a pregnancy (2,561) was associated with an 80% increase in prevalence of any violence and a 230% increase in partner violence. Among women who had a pregnancy, having had a miscarriage or termination was associated with violence. Partner and recent violence is strongly associated with having had a miscarriage, whether alone (OR = 2.85, 95% CI 1.74-4.66), with a termination (OR = 4.60, 2.26-9.35), or with birth, miscarriage and a termination (OR = 4.12, 1.89-9.00).

Conclusions and Implications: Violence among young women of childbearing age is a factor for which doctors should be vigilant, well-trained and supported to identify and manage effectively.

Loxton D, Schofield M & Hussain R.
History of domestic violence and health service use among mid-aged Australian women.
Australian and New Zealand Journal of Public Health, 2004; 28(4): 383-388.

Objectives: To examine associations between history of domestic violence and health service use among mid-aged Australian women, adjusting for physical and psychological health status and demographic factors.

Methods: Population-based cross-sectional postal survey (1996) of the Australian Longitudinal Study on Women's Health. Of 28,000 women randomly selected, 14,100 (53.5%), aged 45-50 years participated. Logistic regressions were used to assess associations between domestic violence and health service use.

Results: After adjusting for demographic variables, multivariate analysis revealed associations between ever having experienced domestic violence and three or more consultations with a family doctor (OR = 2.07, 95% CI = 1.68-2.55), hospital doctor (OR = 1.77, 95% CI = 1.44-2.17), or specialist doctor (OR = 1.54, 95% CI = 1.35-1.75), or being hospitalised (OR = 1.36, 95% CI = 1.20-1.54). After adjusting for demographic variables and physical and psychological health status, these associations were attenuated: three or more consultations with family doctor (OR = 1.36, 95% CI = 1.09-1.70), hospital doctor (OR = 1.16, 95% CI = 0.92-1.45), or specialist doctor (OR = 1.14, 95% CI = 0.98-1.32), and being hospitalised (OR = 1.10, 95% CI = 0.96-1.26).

Conclusions: Physical and psychological health status accounted for the associations between domestic violence and higher health service use, with the exception of GP consultations, which remained associated with domestic violence.

Implications: Physical health status only partially explains the increased health service use associated with domestic violence, while both physical and psychological health status explained higher usage of specialist and hospital services. It seems likely that women who have experienced domestic violence may be seeking consultations from GPs for reasons additional to health status.

Outram S, Murphy B & Cockburn J.
The role of GPs in treating psychological distress: A study of midlife Australian women.
Family Practice, 2004; 21(3): 276-281.

Background. Patient satisfaction with general practice care is important for treatment adherence, yet little is known about women's satisfaction with general practice care in relation to emotional problems.

Objectives. The purpose of the present study was to explore women's perceptions of the help provided by GPs for psychological distress.

Methods. Qualitative and quantitative data were gathered using semi-structured telephone interviews in NSW Australia. The respondents were 322 women aged 45-50 who participated in the baseline survey of Women's Health Australia (WHA).

Results. Of the 309 women who had had a period of distress in the previous 12 months, 159 [52%, confidence interval (CI) 46.4-57.6] had talked to a GP about their difficulties. Listening was the main help given by GPs (68%, CI 60.7-75.3), followed by a prescription for medication (55%, CI 47.2-62.8) and referral to specialist care (13%, CI 7.8-18.2). Few women reported specific behavioural interventions, such as counselling (4%, CI 0.9-7.1) or relaxation (1%, CI 0 to 2.6). There was a relatively high degree of satisfaction with referral, counselling and relaxation advice amongst those who received these treatments. In contrast, a fifth of women who received a prescription or were listened to found these treatments unhelpful (20%, CI 11.6-28.4; and 21%, CI 14.2-29.8, respectively). Thematic analysis highlighted three main concerns for women, namely structural limitations of the GP-patient consultation, GPs' limited interpersonal skills and GPs' limited interest, knowledge and skills in mental health.

Conclusion. While most women find their general practice care helpful, many reported shortcomings in terms of both GP skills and structural limitations of the consultation. These findings are useful in informing the development of training programmes for GPs.

Young AF, Russell A & Powers JR.

The sense of belonging to a neighbourhood: can it be measured and is it related to health and well being in older women?

Social Science and Medicine, 2004; 59(12): 2627-2637.

This study investigates the sense of belonging to a neighbourhood among 9,445 women aged 73-78 years participating in the Australian Longitudinal Study on Women's Health. Thirteen items designed to measure sense of neighbourhood were included in the survey of the older women in 1999. Survey data provided a range of measures of demographic, social and health-related factors to assess scale construct validity. Factor analysis showed that seven of the items loaded on one factor that had good face validity and construct validity as a measure of the sense of neighbourhood. Two of the remaining items related to neighbourhood safety and comprised a factor. A better sense of neighbourhood was associated with better physical and mental health, lower stress, better social support and being physically active. Women who had lived longer at their present address had a better sense of belonging to their neighbourhood, as did women living in non-urban areas and who were better able to manage on their income. Feeling safe in the neighbourhood was least likely in urban areas, increased in rural townships, and was most likely in rural and remote areas. Older women living alone felt less safe, as did women who were less able to manage on their income. This study has identified two sets of items that form valid measures of aspects of the social environment of older women, namely the sense of neighbourhood and feelings of safety. These findings make a contribution to our understanding of the relationship between feelings of belonging to a neighbourhood and health in older women.

Larson A, Bell M & Young AF.

Clarifying the relationships between health and residential mobility.

Social Science and Medicine, 2004; 59(10): 2149-2160.

Health-selective migration within countries has been implicated as one of the mechanisms by which spatial disadvantage is created and maintained. However there is conflicting

evidence on the nature of the relationship between health and mobility, caused in part by diverse definitions, and age and sex differences. This paper uses the first two waves of data for the middle-aged cohort (aged 45-50 in 1996) of the Australian Longitudinal Study on Women's Health to investigate the relationship between four sets of health variables with subsequent local moves (within the same postcode), longer distance moves (between postcodes) and inter-regional migration from rural and remote areas 'up' the urban hierarchy. After adjusting for socio-economic and marital status, short and longer distance mobility among these middle-aged Australian women was positively associated with long term and chronic poor health and being a smoker. Moves between postcodes and rural-to-urban migration were positively associated with multiple recent visits to a medical specialist. Our findings are consistent with UK and US studies that have found mobility to be more strongly associated with poor health than good health in mature adults. As the population ages, the health of receiving areas may be adversely affected by relatively unhealthy in-migrants seeking amenities not provided in their former place of residence.

Williams L & Germov J.

Body acceptance: exploring women's experiences. In L Williams & J Germov (Eds), A Sociology of Food and Nutrition: The Social Appetite.

Melbourne: Oxford University Press, 2004. pp. 403-426.

In this chapter the concept of body acceptance is explored through the findings of a qualitative study of mid-age women. Women's meanings, experiences, and reasons for body acceptance are discussed in terms of life achievements, the influence of significant others, and non-discriminatory personal beliefs. The ability of some women to achieve body acceptance is conceptualised using Anthony Giddens' concept of life politics to explain how certain social processes enable women to exercise their agency. The chapter concludes by highlighting the importance of the findings for health professionals and others seeking to prevent the detrimental health consequences of body obsession and dieting through the promotion of body acceptance.

Smith N, Young A & Lee C.

Optimism, health-related hardiness and well-being among older Australian women.

Journal of Health Psychology, in press.

Understanding the role of psychological characteristics in predicting or maintaining positive well-being in older age may help provide directions for preventive intervention. This paper addresses the question of whether optimism and health-related hardiness contribute to health and well-being among older women. Positive psychological characteristics, including optimism and health-related hardiness, are known to be associated with good self-rated health, but the nature of the relationship is open to question, since these variables are all affected by socioeconomic status, social support, major physical illness, and access to health services. The paper uses data from 9,501 women aged 73 to 78, participating in the population-based Australian Longitudinal Study on Women's Health. Hierarchical multiple regression established that optimism and health-related hardiness explained a significant proportion of the variance in all subscales of the SF-36, and in a measure of stress, even after these potential confounders were taken into account. The data, although cross-sectional, suggest that positive personal characteristics such as these may make a unique contribution to well-being, at least among older women.

Outram S, Mishra GD, Schofield MJ.

Socioeconomic and health related factors associated with poor mental health in midlife Australian women.

Women and Health, in press.

Objective: To examine associations between poor mental health and sociodemographic and health related variables in midlife Australian women.

Method: The study sample comprised 13961 women aged 45-50 years from all states and territories of Australia who participated in the baseline postal survey for the Australian Longitudinal Study on Women's Health, conducted in 1996. The outcome measure, poor mental health status, was measured by the Mental Health Index (MHI-5) of the SF-36.

Results: Sociodemographic factors associated with poor mental health were low educational levels, being unemployed, too sick to work or engaged solely in home duties, and non English speaking background (European). Other factors associated with poor mental health were a higher number of visits to the doctor in the past year, menopausal status (surgical and peri-menopausal), low satisfaction with close relationships, low perceived social support outside family, feelings of not being understood, less exercise, and smoking 20 or more cigarettes per day, and more life-events over the past 12 months. An interesting result was that it was satisfaction with closest personal relationship that was related to mental health status rather than marital status per se.

Conclusion and Implications: The study highlights the strong association between poor mental health and poorer socioeconomic conditions, particularly education and employment, suggesting the need to promote more education and employment opportunities for women before they reach midlife. Detection of mental health problems and appropriate follow-up by health care providers of women with social and behavioural risk factors may improve the quality of life for these women. Poor mental health is an increasing community problem with a high burden of suffering and high direct and indirect costs. This study gives some indication of appropriate areas for intervention.

Wade T & Lee C.

The impact of breast cancer on the lives of middle-aged women: Results from the Australian Longitudinal Study of Women's Health.

Health Psychology, in press.

This paper investigated the impact of breast cancer (BC) on physical, mental and social health in mid-aged Australian women (aged 45-50 years). Two waves of data collected 2 years apart from a longitudinal population-based survey of 12,177 women identified three groups: (i) 11,933 (98%) women who reported never having had BC, (ii) 181 (1.5%) women who reported a diagnosis of BC at Time 1 (T1), and (iii) 63 (0.5%) women who reported onset of BC between T1 and Time 2 (T2). The first group was compared to the other groups across a number of variables including physical and

mental health, and social functioning at T1 and T2. The major initial impact of BC was on physical and social functioning, with indications of long-term impact on general health and stress about health, and a tendency to impaired social functioning and mental health. Worse mental health before onset of BC was the only significant predictor of worse mental health after BC.

France K, Lee C & Powers J.

Correlates of depressive symptoms in a representative sample of young Australian women.

Australian Psychologist, in press.

This paper presents a descriptive analysis of the prevalence of depressive symptoms among a national cohort of young Australian women, and the characteristics of those who experience them. It explores the associations between demographic and health-related variables and depressive symptoms in a representative sample of 9333 Australian women aged 22-27 years, from the Australian Longitudinal Study on Women's Health. Approximately 30% of these young women indicated that they were experiencing depressive symptoms, as indicated by the CES-D 10. After adjusting for age and rurality of residence, depressive symptoms were related to the following demographic variables: low income, low educational qualifications, a history of unemployment, not being in a relationship, and living arrangements other than living with a partner. Those health-related variables which were significantly associated with depressive symptoms included frequent visits to doctors and medical specialists, and a higher number of physical symptoms experienced and diagnoses made. More illicit drug use, higher use of cigarettes and alcohol, and lower exercise status were also significantly associated with depressive symptoms.

Dobson A, Smith N & Pachana N.

Some problems with life event lists and health outcomes.

International Journal of Behavioral Medicine, in press.

Lists of life events are widely used in health outcomes research. As part of a large cohort study of women's health in Australia, age- and gender-specific life events lists were developed and administered to women in different age groups over time. In this paper we provide empirical evidence that recall of life events is subject to telescoping (that is, remote events are reported to have occurred more recently) and to mood (women with lower mental health scores report more life events, especially "perceived" rather than "factual" events). Nevertheless, even after adjustment for confounders, there is a clear association between poorer physical health and more life events. Therefore these results demonstrate a continuing need for lists of life events in health research but also highlight the methodological challenges in using them.

Mishra G & Dobson A.

Multiple imputation for body mass index: lessons from the Australian Longitudinal Study on Women's Health.

Statistics in Medicine, in press.

In large epidemiological studies missing data can be a problem, especially if information is sought on a sensitive topic or when a composite measure is calculated from several variables each affected by missing values. Multiple imputation is the method of choice for 'filling in' missing data based on associations among variables. Using an example about body mass index from the Australian Longitudinal Study on Women's Health, we suggest a method for identifying a subset of variables that are particularly useful for imputation of a target variable. Then we illustrate two uses of multiple imputation. The first is to examine and correct for bias when data are not missing at random. The second is to impute missing values for an important covariate; in this case omission from the imputation process of variables to be used in the analysis may introduce bias. We conclude with several recommendations for handling issues of missing data.

Khan A, Hussain R, Schofield M.

Correlates of sexually transmitted infections in young Australian women.

International Journal of STD & AIDs, in press.

The study examined correlates of three common sexually transmitted infections (STIs) among Australian women. The sample comprised 9,582 women aged 22-27 years who took part in the second postal survey in 2000, of the young cohort of the Australian Longitudinal Study on Women's Health. Self-reported rates of diagnosis in past four years were: Chlamydia 1.47% (n=141), genital herpes 1.75% (n=168), genital warts 3.45% (n=331). Multivariate analyses revealed that the odds of all three STIs increased with number of male sexual partners and illicit drug use. Younger and rural women had higher odds of being diagnosed with Chlamydia. The odds of both genital herpes and genital warts were higher with longer oral contraceptive pill use and higher stress, while women who had experienced violence were found to have higher odds of herpes. The identification of factors associated with common STIs among young Australian women will inform better targeted health promotion and disease prevention programs.

Mishra G, Ball K, Patterson A, Brown W, Hodge A & Dobson A.

Socio-demographic inequalities in the diets of mid-aged Australian women.

European Journal of Clinical Nutrition, in press.

Objectives: This study reports on food and nutrient intakes for a large population sample of mid-aged Australian women participating in the Australian Longitudinal Study on Women's Health.

Design: This cross-sectional population-based study used the Cancer Council of Victoria food frequency questionnaires to derive estimates of food and nutrient intakes.

Setting: Nationwide community-based survey.

Subjects: A total of 10,561 women aged 50-55 years, at the time of the survey in 2001.

Results: Analysis showed favourable patterns of food intake, with frequent consumption of many foods that are promoted as components of a healthy diet (e.g., fresh fruit, leafy green and other vegetables, bread, cereals, milk and

meat). Intakes of both foods and nutrients varied significantly across socio-demographic groups, with unmarried women, and women in 'labouring' occupations (e.g., cleaner, factory worker, kitchenhand) having poorer nutrient intake.

Conclusions: As well as helping to address the dearth of current data on dietary intakes in the Australian population, the results highlight the need for continued targeted public health strategies aimed at improving diet of women from the various socio-economic backgrounds.

Bell S & Lee C.

Emerging adulthood and patterns of physical activity among young Australian women.

International Journal of Behavioral Medicine, in press.

The transition from adolescence to young adulthood is associated with a sharp decline in physical activity, particularly for women. This paper explores the relationships between physical activity status and change, and status and change in four life domains: residential independence, employment status, relationship status, and motherhood. Two waves of survey data from a representative sample of 8,545 Australian women, aged 18-23 at Survey 1 and 22-27 at Survey 2, were analysed. Cross-sectionally, physical inactivity was most strongly related to being a mother, married and not being in the labour force. Longitudinally, decreases in physical activity were most strongly associated with moving into a live-in relationship, with getting married, and with becoming a mother. When considered in combination, women who were married with children, and not employed outside the home, were the most likely to be physically inactive. The data suggest that adoption of adult statuses, particularly traditional roles involving family relationships and motherhood, is associated with reductions in physical activity for these women, although it is possible that the effect is driven by socio-economic factors associated with early transitions. The data suggest a need for interventions to promote continued physical activity among young women who cohabit or marry, and among those not in the workforce, in addition to those supporting young mothers to be physically active.

Sibbritt D, Adams J, Young A.

A longitudinal analysis of mid-age women's use of complementary and alternative medicine (CAM) in Australia, 1996-1998.

Women & Health, in press.

Complementary and Alternative Medicine (CAM) has become increasingly popular amongst healthcare consumers world-wide. As such, CAM is now an important public health issue with serious implications for healthcare organization and delivery. While previous studies have provided a profile of CAM users, there remains very limited analysis of CAM consumption over time. The purpose of this paper is to describe the changing use of CAM practitioners over time by 11,454 mid-age women in the Australian Longitudinal Study on Women's Health. Over the study period (1996-1998), 10% of women adopted the use of CAM and 9% relinquished CAM. The predominant factor found to be predictive of CAM adoption was changes in health status. Specifically, those women experiencing more illness over time are more likely to adopt CAM than those experiencing no change or better health. CAM relinquishment was associated with use of non-prescription medications, where women were more likely to relinquish CAM if they never used non-prescription medications or if they stopped taking non-prescription medications. This paper constitutes an exploratory investigation into CAM use over time. As such, there is need for further research to provide in-depth examination of the adoption and relinquishment of CAM use over a longer time period.

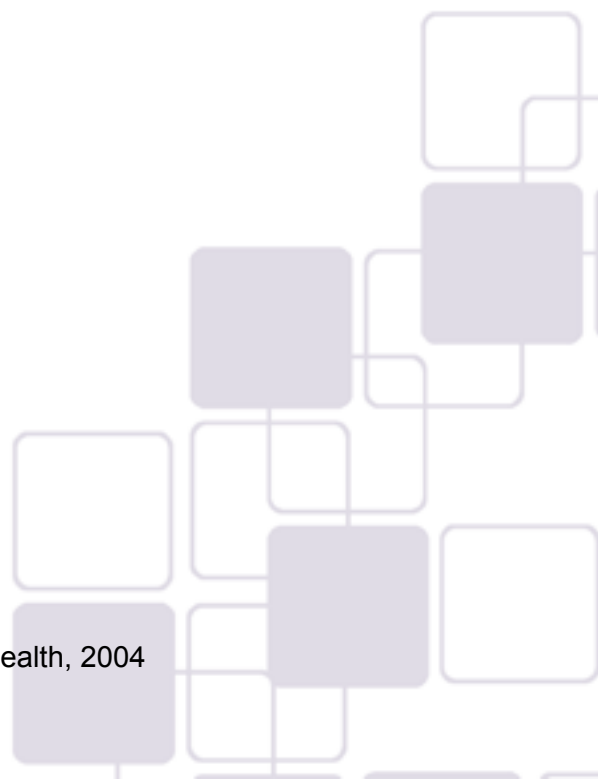
Miller-Lewis L, Wade T, Lee C

Psychosocial risk factors for pregnancy risk-taking in young women in emerging adulthood: Preliminary evidence from the Australian Longitudinal Study on Women's Health

Australian Journal of Psychology, accepted with revisions.

This study longitudinally investigated psychosocial predictors of pregnancy risk-taking in young women from the Australian Longitudinal Study on Women's Health. Two mail-out surveys assessing socio-demographic, education/competence, psychological well-being, and aspiration/identity factors were completed at ages 18 and 22 by 1647 young women in emerging

adulthood, and a third survey assessing pregnancy risk-taking behavior was completed by a sub-sample of 90 young women at age 24. Using principal components analysis to reduce the number of variables, it was found that higher psychosocial distress at age 22 was a risk factor for pregnancy risk taking at age 24. Post-hoc analyses suggested that the strongest component of psychosocial distress when predicting pregnancy risk-taking was higher depressive symptoms. Demographic, education, unemployment, and future aspirations factors at age 18 and 22 were unrelated to pregnancy risk-taking at age 24.



Presentations 2004

Lee C & Smith N.

Predictors and correlates of mental health in a population sample of Australian Women.
Australian & New Zealand Society of Behavioural Medicine conference 2004, Christchurch, New Zealand, 12-14 February 2004.

Loxton D.

The physical, social and economic health of women with dependent children, following relationship breakdown.
The Office of the Status of Women, Department of the Prime Minister and Cabinet, Canberra, Australia 17 February 2004.

Taft A, Watson L & Lee C.

Violence against young Australian women and adverse pregnancy and mental health outcomes: A cohort analysis.
Perinatal Society of Australia and New Zealand 8th Annual Congress, Sydney, New South Wales, Australia, 15-18 March 2004.

Watson L, Taft A & Lee C.

Association between age of occurrence of reproductive events and violence against young women: A cohort analysis.
Perinatal Society of Australia and New Zealand 8th Annual Congress, Sydney, New South Wales, Australia, 15-18 March 2004.

Dobson A.

Australian Longitudinal Study on Women's Health: Case study for record linkage.
Workshop on Using Administrative Databases for Health Research: Challenges and Opportunities, University of Sydney, Sydney, New South Wales, Australia, 25 June 2004.

Lee C.

Overview of the 'Intergenerational Report' and 'Australia's Demographic Challenges' Report.
Academy of Social Sciences in Australia workshop, Australian women facing the future: Is the Intergenerational Report gender-neutral? Brisbane, Queensland, Australia, 1-2 July 2004.

Loxton D.

Divorce, separation and family economic resources: Implications for women's retirement.
Academy of Social Sciences in Australia workshop, Australian women facing the future: Is the Intergenerational Report gender-neutral? Brisbane, Queensland, Australia, 1-2 July 2004.

Warner-Smith P.

Mid-age women consider retirement.
Academy of Social Sciences in Australia workshop, Australian women facing the future: Is the Intergenerational Report gender-neutral? Brisbane, Queensland, Australia, 1-2 July 2004.

McNair R.

Lesbians, health and midlife.
Academy of Social Sciences in Australia workshop, Australian women facing the future: Is the Intergenerational Report gender-neutral? Brisbane, Queensland, Australia, 1-2 July 2004.

McKay H.

Is Childlessness a Hazard to Women's Well-Being?: Childless women at midlife - a report on a sub-study from the Women's Health Australia mid-age cohort.
Academy of Social Sciences in Australia workshop, Australian women facing the future: Is the Intergenerational Report gender-neutral? Brisbane, Queensland, Australia, 1-2 July 2004.

Byles J.

Older widows' lives.
Academy of Social Sciences in Australia workshop, Australian women facing the future: Is the Intergenerational Report gender-neutral? Brisbane, Queensland, Australia, 1-2 July 2004.

Brown P.

Work/life balance and women's well-being: The importance of me in time.
Academy of Social Sciences in Australia workshop, Australian women facing the future: Is the Intergenerational Report gender-neutral? Brisbane, Queensland, Australia, 1-2 July 2004.

Young A & Powers J.

Lost but not forgotten: adjusting for attrition in the Australian Longitudinal Study on Women's Health 1996-2003.
International Biometric Conference/Australian Statistical Conference, Cairns, Queensland, Australia, 11 -16 July 2004.

Lee C, Mishra G & Kuh D.

Country of birth, country of residence and menopausal transitions and symptoms: British Birth Cohort and Australian Longitudinal Study on Women's Health.

8th International Congress of Behavioural Medicine, Mainz, Germany, 25-29 August 2004.

Lee C.

How does movement into and out of family caring roles affect women's health?

10th Annual National Health Outcomes Conference, Canberra, Australia, 15-16 September 2004.

Bryson L & Powers J.

Using population data for longitudinal research: some possibilities and problems.

Australian Population Association Annual Conference, ANU, Canberra, 15-17 September 2004.

Young A, Powers J & Dobson A.

Lost and Found: a study of the patterns and correlates of attrition and resumed participation in the Australian Longitudinal Study on Women's Health.

Third Conference of Epidemiological Longitudinal Studies in Europe, Bristol, UK, 22 September 2004.

Lee C.

Public Health Psychology: The Australian Longitudinal Study on Women's Health.

Keynote Address, Annual Australian Psychological Society Conference, Sydney, 29 September – 3 October 2004.

Warner-Smith P & Brown P.

Managing work-life tensions in dual-earner families in Australia.

International Association for Time Use Research Annual Conference, Italian National Statistical Institute, Rome, 27-29 October 2004.

Brown P & Warner-Smith P.

The Taylorisation of family time: An effective strategy in the struggle to 'manage' work and life?

International Association for Time Use Research Annual Conference, Italian National Statistical Institute, Rome, 27-29 October 2004.

Ironmonger D, Soupourmas F, Brown P & Warner-Smith P.

Testing the Practicality of a Personal Digital Assistant (PDA) Questionnaire vs. a Beeper and Booklet (B&B) Questionnaire in a Random-Time Experience-Sampling Method (RTES) Context. International Association for Time Use Research Annual Conference, Italian National Statistical Institute, Rome, 27-29 October 2004.

Byles J, Furuya H, Young A & Parkinson L.

A drink to your health: Behaviours, benefits, and risks of alcohol use among older women.

37th National conference of the Australian Association of Gerontology, Melbourne, Victoria, Australia, 17-19 November 2004.

Byles J, Warner-Smith P, Everingham C, Stevenson D, Parkinson L & Young A.

Women consider retirement: A critical investigation of attitudes towards work and retirement in three generations of Australian women.

37th National conference of the Australian Association of Gerontology, Melbourne, Victoria, Australia, 17-19 November 2004.

Loxton D.

Intimate partner violence and health services for women.

Women's Health NSW Conference, Newcastle, 17 November, 2004.

Seminars & Workshops 2004

Research Centre for Gender and Health /
Women's Health Australia 2004 Seminar
Series, University of Newcastle, Newcastle,
New South Wales, Australia.

9 March 2004.

Loxton D & Warner-Smith P.

*The physical, social and economic health and
wellbeing of women with dependent children,
following relationship breakdown.*

6 April 2004.

Lloyd B.

*The right balance: Young women juggle work
and motherhood.*

11 May 2004.

Collins C.

*Are you what you eat? Association between diet
and health in the Australian Longitudinal Study
on Women's Health.*

8 June 2004.

Byles J, Furuya H, Powers J & Young A.

Australian women and alcohol consumption.

13 July 2004.

Williams L.

*What are the differences between women who
gain weight and those who don't gain weight
across menopause?*

10 August 2004.

Baines S & Powers J.

Vegetarianism – is it healthy?

14 September 2004.

Outram S.

*Causes and cures: Descriptions of and
attributions for psychological distress in midlife
Australian women.*

12 October 2004.

Warner-Smith P & Everingham C.

*Things are getting better all the time? Three
generations of Australian women consider
retirement.*

9 November 2004.

Brotherston R.

*Reproductive technology and the Australian
birthrate: What do young Australian women think
about having children?*

Human Rights and Equal Opportunity
Commission (HREOC) WORKSHOP : Women
taking action locally and globally, University
of New South Wales, 17 June 2004

**Bryson L, Byles J, Loxton, D &
Warner-Smith P.**

*Implications of social diversity for women's
health: findings from the ALSWH*

**Medical Schools Outcomes Project run by
CDAMS. University of New South Wales,
2 September 2004.**

Ball J.

*Data collection experiences from a
longitudinal project.*



**Australian Longitudinal Study on
Womens' Health 2004 Research Meeting
Series, The University of Queensland, Bris-
bane, Queensland, Australia.**

4 March 2004.

Dobson AJ & Pachana N.

Pet therapies.

15 April 2004.

Lee C.

*Looking forward and looking back: Childless-
ness in the Australian Longitudinal Study on
Women's Health.*

3 June 2004.

Koloski N, Pachana N, Smith N & Dobson A.

*The extent of mixed anxiety-depression in older
women.*

8 July 2004.

Humphreyes-Reid, L.

*Management of cardiovascular disease in the
older cohort.*

5 August 2004.

Smith N.

*Mental health: psychometric, health and
social issues.*

**Longitudinal Data Analysis Workshop,
Newcastle, New South Wales, Australia, 25
March 2004**

Powers J.

*Attrition between surveys 1 and 2 for all cohorts
and between surveys 1, 2 and 3 for the mid-age
cohort.*

Byles J.

*Multiple cross-sections of data from surveys 1, 2
and 3 for the older cohort and individual differ-
ences between survey 1 and 2.*

Sibbritt D.

*Using CART to investigate frailty in older
women.*

Furuya H.

*Repeated measures analysis of alcohol con-
sumption in the older cohort.*



Completed Theses 2004

Psychosocial risk factors for pregnancy and pregnancy risk-taking in late adolescent females: a Women's Health Australian longitudinal inquiry.

Student: Lauren R. Miller Lewis, School of Psychology, Flinders University

Degree: PhD — **Supervisor:** Dr Tracey Wade

The purpose of this research was to gain a greater understanding of why some young people risk pregnancy when others do not. This project expanded on previous research by conducting a series of longitudinal, multivariate, theoretically-informed studies which examined the predictors of pregnancy, childbearing, and pregnancy risk-taking (i.e., non-optimal use of contraception) in "emerging adults" and adolescents. A comprehensive Pregnancy Risk-Taking Questionnaire was designed for the purposes of this research which took into account frequency of sexual activity, the types of contraception used, contraceptive consistency, and contraceptive compliance. Use of this questionnaire with several hundred heterosexually-experienced Australian young people (aged 15 to 24) indicated that it provided several appropriate measures of pregnancy risk-taking, and that inconsistent and incorrect contraceptive use was common in this group. This research applied components of Erikson's psychosocial developmental theory to youth reproductive behaviours, and suggested four groups of developmental risk factors which were relevant to reproductive behaviour in youth: 1) socio-demographic factors, 2) perceived competence or industry factors, 3) psychosocial well-being factors, and 4) aspirations or identity factors. Three longitudinal studies examined the influence of these predictors. The first investigated the psychosocial predictors of subsequent pregnancy and childbearing in emerging adult young women from the Australian Longitudinal study of Women's Health (n= 1647, aged 18-20 at Survey 1 and 22-24 at Survey 2), and the second examined predictors of pregnancy risk-taking in a sub-sample of these emerging adults (n= 90, aged 24 when pregnancy risk-taking was measured). The final longitudinal study investigated psychosocial predictors of pregnancy risk-taking and early sexual initiation over a 6-month period in male and female adolescent high school and technical college students (n=288, aged 14-18). The results of these three studies indicated that poor psychological well-being was a strong and robust risk factor for subsequent pregnancy,

childbearing, and pregnancy risk-taking in emerging adult young women, and pregnancy risk-taking in adolescents. Industry-related variables (unemployment and industry achievement) were also frequently found to be predictive of youth reproductive behaviours, with poorer industry achievement a risk factor for measures of pregnancy risk-taking in adolescents, and greater experience with unemployment a risk factor for pregnancy and childbearing (but not pregnancy risk-taking) in emerging adult young women. Mediation analyses indicated that poorer industry was associated with poorer psychological well-being, which in turn predicted subsequent pregnancy risk-taking, pregnancy, and childbearing in these young people. Other risk factors identified for early pregnancy and childbearing in the emerging adults were greater family aspirations combined with lower job aspirations, and for pregnancy only, greater alcohol use and stress. In the adolescent sample, having more positive attitudes and intentions towards early parenthood, experiencing sexual coercion, receiving less comprehensive sex education, and being male were predictors of exhibiting greater pregnancy risk-taking. Other socio-demographic factors played a relatively minor role. The risk-factor findings from these quantitative studies corresponded well with results from a qualitative focus group conducted with 7 young mothers. Overall, the findings suggested that the picture of the adolescent and the emerging adult who is at risk of early pregnancy and childbearing is not an overly positive one. As expected based on the propositions of the Eriksonian psychosocial developmental model, those young people who were the least emotionally and competently equipped to cope with the difficulties of early parenthood were the ones more likely to risk pregnancy, and subsequently to become pregnant and give birth. These results suggest that enhancing competence and psychological well-being in conjunction with providing comprehensive sex education may be a worthwhile approach to the prevention of early pregnancy in Australian youth.

Social support in later life: Cross-sectional and longitudinal analyses of inter-relationships between psychosocial variables in the Women's Health Australia study

Student: Emma Harley, School of Psychology, Flinders University
Degree: PhD **Supervisor:** Dr Nancy Pachana & Dr Gerard Byrne

This study examined the roles of psychosocial variables including social support and optimistic appraisal in understanding the mental health transitions of older Australian women. Data were drawn from a community-dwelling sample of 9514 older Australian women aged 72 – 79 years, as part of the Australian Longitudinal Study of Women's Health (ALSWH).

Cross-sectional analyses were conducted for data collected in 1999 for the general sample of women, as well as for subgroups of women considered to be at greater risk of mental health problems – those with the poorest physical health; those having experienced higher numbers of negative life events; and women from non-English speaking backgrounds.

Results of multiple regression analyses indicated optimism, social satisfaction, and social interaction to be significant predictors of mental health in all subsamples. The role of protective factors appeared to be diminished for women with poorer physical health.

Data for 8646 older women collected in 1999 and 2002 were then analysed longitudinally via multinomial logistic regression analyses. Women whose mental health had stayed

adequate over the three year period were compared to subgroups of women whose mental health had stayed poor, declined, or improved. SF-36 Mental Health scores, in addition to doctor diagnosed depression and anxiety were used as criterion variables. Comparison of means across transition groups of women suggested these groups represented distinct mental health trends in aging. Results indicated optimism, social satisfaction, and social interaction to be significantly lower for all groups of women, other than those with adequate ongoing mental health. Women with poor or declining mental health were more likely to have poorer social satisfaction at Time1; social interaction was seen to decline in unison with mental health for women with chronic or declining mental health. Physical health had little explanatory value in predicting mental health transitions. Data provided additional evidence for a significant role of life events in effecting change in mental health status over time.

Public health recommendations are outlined, including increased research funding for the study of psychosocial variables in healthy aging; improved mental health education both within public and primary care settings; and additional resources for mental health treatment services for older Australian women. Clinical implications of the project are also discussed, and include the enhanced training of clinical psychologists in the area of aging, and improved recruitment of psychologists into the aged care sector; further investigation of evidence-based therapies in the treatment of late-life depression and anxiety; and the use of appropriate psychological interventions such as cognitive behaviour therapy for late-life depression and anxiety; interpersonal therapy is recommended for older women experiencing depressive symptoms and relational deficits.



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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. 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 are also on the project website.

