women's health australia

Annual Report 2001

Australian Longitudinal Study on Women's Health

The University of Newcastle
AUSTRALIA

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Annual Report of the Australian Longitudinal Study on Women's Health, 2001

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Director's Report

This is the annual report for the sixth year of the Australian Longitudinal Study on Women's Health. The project, conducted by the University of Newcastle in collaboration with staff at the University of Queensland, is funded by the Commonwealth Department of Health and Aged Care. It explores factors which promote good health, and factors affecting ill health, among Australian women in order to inform government policy and health care practice. The main research method is a series of longitudinal surveys of three age groups of Australian women, with smaller targeted substudies to address specific issues.

The project is based on a social perspective on health, studying women's health in the context of their personal, family, social, employment and economic circumstances. The research team comprises experts in a wide range of disciplines including sociology, epidemiology, psychology, medicine, nutrition and statistics.

In April 1996, over 40,000 women in three age groups (18-23 years, 45-50 years, and 70-75 years) were selected from the Medicare database, which provides the most complete and up-to-date list of Australians. Sampling was random within each age group, except that women from rural and remote areas were sampled at twice the rate of those living in urban areas. This oversampling allows the research team to make valid comparisons between city and country women, in order to answer policy questions about health, service use, and well-being in different parts of Australia.

The age groups were chosen in 1996 with the longitudinal design of the project in mind. We aimed to recruit cohorts of women who would be going through important life changes over the 20-year life planned for the project. The young women will move through the stages of early adulthood, with many moving away from their parents' homes and shared accommodation and into permanent relationships, jobs, motherhood and increasing responsibilities. Many of the mid-age women are moving into, and through, menopause at the same time as they are undergoing major changes to their family structures, their paid work, and their leisure pursuits. The older women are perhaps the most varied of all: most women in their early 70s are in good health and leading independent lives in the community. The longitudinal study will help to identify the characteristics of women who are able to maintain that independence, and those factors associated with increasing dependence and, perhaps, institutionalization.

2001 saw the beginning of the third wave of the main study, with Survey 3 of the mid-age cohort. These women, now aged 50 to 55, responded to a survey that covered aspects of physical health, emotional well-being, gynaecological matters, use of health care services, health-promoting behaviour, and their family and work lives. A new addition to this year's questionnaire was a detailed survey of diet.

The main study is conducted on a three-year rolling basis, with one age group surveyed each year, but all three cohorts participating in substudies at all times. This year, for example, the mid-age women were surveyed, while the data obtained from the younger women (surveyed in 2000) were being analysed and the survey for the older women in 2002 was being developed. Simultaneously, the programme of targeted substudies has continued. This year studies have been conducted on mid-age and older women with diabetes and mid-age women who have experienced abusive relationships. There are also substudies to explore the leisure experiences of mid-age and younger women, and the younger women's plans for work and motherhood.

Data analysis lags a little behind the conduct of the surveys, as we have to ensure that data are accurately entered and checked before any analysis can begin. The

main on-going analyses explore changes between Surveys 1 and 2, focusing on changes in health and well-being and their relationship with biological factors such as pregnancy or menopausal transitions, individual factors including optimism and resilience, social factors including family and community support, and environmental factors such as place of residence.

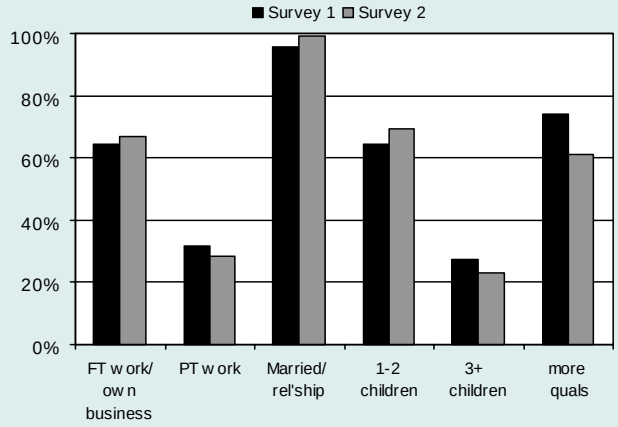
The project continues to produce findings of relevance to health and social policy and practice, as well as making a significant contribution to scientific knowledge. The researchers and support team are committed to achieving and maintaining the highest standards of research and to providing information to the public and governments with the aim of improving health and health services for women.

Annette Dobson

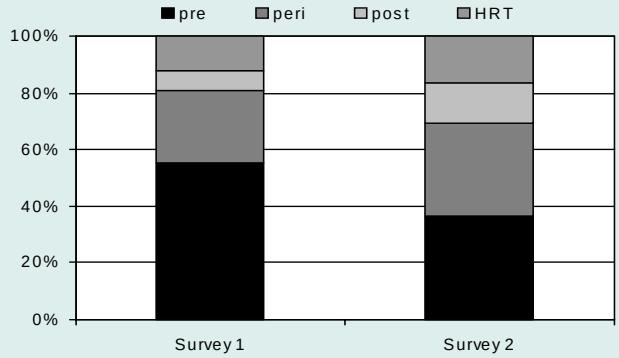
Project Director

Changes and life transitions in three generations of Australian women

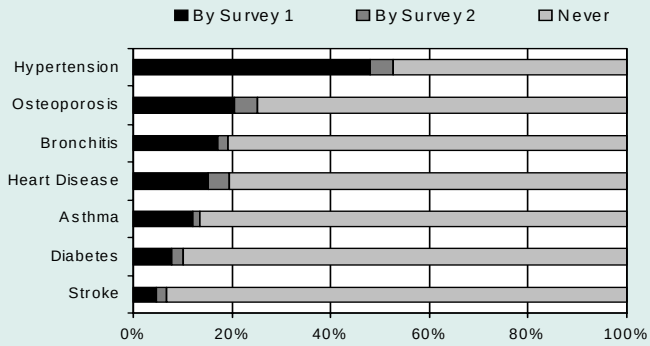
Young women's aspirations - Surveys 1 and 2



Menopausal status among mid-age Australian women



Medical conditions among older Australian women



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Five of the office staff (from left) Emma Threlfo, Jennifer Powers, Joy Goldsworthy, Jean Ball and Lyn Adamson were awarded the University of Newcastle's 2001 Staff Excellence Award. Pictured here with Vice Chancellor Roger Holmes.

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Dr Anne Young, BMath, DipMedStat, PhD
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Ms Alicia Frost
Ms Renay Greig
Ms Jenny Helman
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Ms Catherine Ireland
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Congratulations to our successful graduates - 2001

Ms Fiona Campbell, MHlthSci(WomHlth)
Dr Pauline Chiarelli, PhD
Dr Brendan Goodger, PhD
Ms Barbara Reen, MMedSci
Ms Nadine Smith, MMedStats

Women's Health Australia: What Do We Know? What Do We

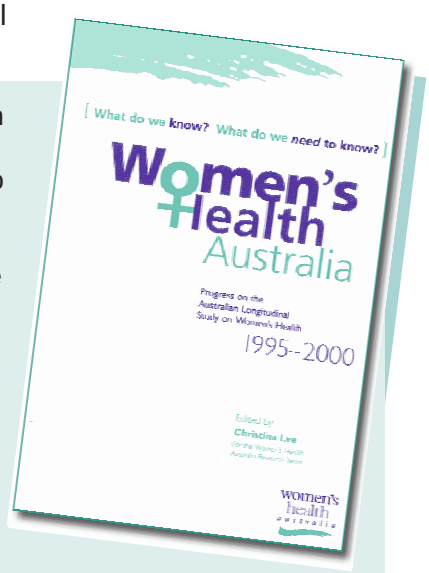
Adapted from speech given by Professor Anne Edwards, Vice-Chancellor, Flinders University of South Australia, at the launch of the Women's Health Australia book, at the 4th Australian Women's Health Network Conference, Adelaide, 19th February 2001. Reprinted by permission.

The research project that started life as the Australian Longitudinal Study on Women's Health and is now also known as Women's Health Australia is, we believe, a world first. Its uniqueness lies in its size, scale and scope: the project is a study of Australian women spanning the full adult life-course from 18 to the 90's, covering the broad spectrum of women's circumstances, roles, experiences and feelings and how these relate to physical and mental health, and over time.

The overall goal of the study is to have information collected at regular intervals from members of a very large and representative sample of the total population of Australian women, who when first surveyed in 1996 were in three age cohorts, 18-23, 45-50 and 70-75, and who will be resurveyed six or seven times in the period to 2016, so the researchers can follow the same individuals as they move through twenty years of their lives. The brilliance of such a design is that the combination of the large numbers (over 40,000 women), the diversity across a range of socio-demographic factors - not only age but cultural background, education, employment, urban/rural, family and domestic relationships, and so on - and the longitudinal dimension permits the tracing of changes and the establishing of cause-effect relationships between events.

We are coming to the point where these three cohorts of women have been revisited once each since the original survey in 1996, and are now being invited to participate for a third time. The emerging findings demonstrate the capacity of this study to answer key policy and health intervention questions. Interesting hypotheses that could be posed on the basis of the first survey and research evidence from other studies can now be tested against the reported experience of these groups of women.

Credit for this very important and innovative study must go to a number of people and groups. The previous Labor Government, under the Minister of Health at the time, Carmen Lawrence, initiated the idea of such an enormous and ambitious and therefore expensive study and launched the project with three years of funding in 1995. This was in the context of a significant amount of interest and effort associated with the



The book, Women's Health Australia: What do we know? What do we need to know? was published in 2001 to provide a brief, accessible, overview of the project plan and of the results of the first wave of survey data. it consists of a series of short chapters which describe the project as a whole and the three age cohorts, and then present descriptive data on five broad themes from the three cohorts: health service use; health-related behaviour; time use, work, leisure and women's health; life stages and key events; and violence and abuse. Please contact us to order a copy of the book - $22 (GST inclusive).

development of a National Women's Health Strategy which involved large numbers of women, health providers and community groups across the country. Credit is also due to the Coalition Government under Minister Michael Wooldridge which renewed funding for a further five year period.

Secondly we must recognize the vision, creativity and courage of the original team of women at the University of Newcastle who took up the challenge of responding to the tender, who conceived the project in its current form with its broad inter-disciplinary character and took on the huge responsibility of such a massive project stretching far into the future, knowing that the personnel would inevitably change, as it has done, but with the confidence that there would be people able and willing to keep going.

With the commitment of the core research team and the involvement of a growing number of researchers from other universities and agencies around the country in the whole project, the future of the project is critical. This means ongoing financial support being provided by future governments. This is essential if the momentum is to be maintained and the full potential of this study is to be realized. The longer the study continues, the more valuable it is, as the data become more and more unusual and more and more useful in answering major health and life style questions with important policy and service implications.

The project is entering a new and important phase, with the publication of a volume reporting on progress to date. The book makes available for the first time in a readily accessible form, information about the kinds of topics that are being investigated and gives to the wide range of people involved with women's health and related issues an understanding of the capability of this multi-disciplinary, large-scale, longitudinal study for informing policy, politics and practice. It helps get the research out into the public arena and opens up opportunities for input into the project from people and organizations working in the field.

This project and its data bank is a huge public resource and it is the desire of Women's Health Australia that it becomes a resource that is widely used for all sorts of purposes. To give one highly topical example. The broad conceptualisation of health and health issues and the wide diversity of the women in the sample, which included a deliberate oversampling of women living in rural, regional and remote areas to get adequate numbers for detailed analysis, at a time when the community concerns about the changes that are affecting these areas were only just beginning to make their impact, means that many of the kinds of questions that are being asked about their relative disadvantages and their impact on women can be investigated. This is something Australia should be justifiably proud of and should promote nationally and internationally.

women's health australia

Research Highlights 2001

This year saw the beginning of the third wave of the main study, with Survey 3 of the mid-age cohort carried out and Survey 3 of the older cohort prepared and piloted. Women in the mid-age cohort are now aged between 50 and 55, and the focus is on the maintenance of good health during the menopausal transition and on factors that may influence their health and well-being as they move through the next decades.

Survey 3 of the mid-age women includes the SF-36 questions about quality of life, and questions about health service use (access and satisfaction), health behaviour and screening, life events, emotional well-being, time use, and the social and economic environment. These questions maintain the continuity of the longitudinal survey. In addition, this survey includes the Food Frequency Questionnaire developed by the Anti Cancer Council of Victoria. This self-report instrument has been devised for the Australian population and the Australian food sources, so that it is able to provide accurate estimates of women's dietary intake and nutrients.

Survey 3 was sent to all women who participated in Survey 1 of the mid-age cohort and have not withdrawn from the study or become ineligible. The response rate of 85% is consistent with the best results of similar surveys in other countries (we had a response rate of 92% to Survey 2, but it is inevitable that some participants will be lost at each wave).

Another major activity in 2001 has involved seeking permission from all women to access some data from their Health Insurance Commission records. Privacy regulations require that written individual consent is obtained in order to access Medicare and Pharmaceutical Benefits Service records. While the process of sending information and consent forms to all 40,000 participants has been a massive undertaking, it provides a rich source of information which is used to analyse women's out-of-pocket costs for services, the number of health care providers visited, and participation in health screening.

In 2001 sub-studies have included surveys with mid-age women who have experienced relationship violence; research examining the treatment choices of women with menstrual problems; and assessments of women's time use, access to leisure activities, and aspirations for work and motherhood. Outcomes and achievements this year, are described in more detail in the following pages.

Smoking in Young Women

Smoking patterns in young women: Evidence from the Australian Longitudinal Study on Women's Health

In Australia prevalence of smoking is highest among women and men in their twenties and then it declines. To reduce smoking it is important to know about factors associated with changes in smoking patterns in this age group.

The Australian Longitudinal Study on Women's Health provides an excellent way of exploring changes in smoking behaviour among young women in their social context. In this report we examined the smoking behaviour of over 9,000 women when they completed Survey 1 in 1996 and Survey 2 in 2000.

At Survey 1 27% of the young women, then aged 18 to 23, were smokers. In the four years between surveys one quarter of these women quit.

Becoming pregnant was the major factor related to giving up smoking. Among smokers in 1996 the proportion who said they were no longer smoking in 2000 was 54% among those who were pregnant and 56% among those pregnant for the first time. Quitting rates were also higher among married women compared to those who were not married or who were in de facto relationships.

Smoking prevalence remained highest among women with lower education levels, women who lived with children but no partner and those who had more time on their hands.

While only 6% of women took up smoking between 1996 and 2000, smoking adoption was most common among younger women and those not born in Australia. High prevalence of bingeing on alcohol was a powerful predictor of smoking adoption. The frequency of alcohol bingeing was the most persistent factor influencing smoking behaviour for adoption, maintenance and cessation of smoking.

While binge drinking and smoking indicate a continuance of a 'partying' lifestyle for young women, life changes such as marriage and pregnancy appear to modify smoking behaviour. Pregnancy is obviously a key opportunity for smoking prevention. Increased motivation to quit and increased contact with the health care system at this time in a woman's life provide ideal conditions for maximal support for behaviour change.

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Collaborator
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Funding
National Tobacco Strategy, Commonwealth Department of Health and Aged Care

Sleeping Difficulty

WHA Investigators
Associate Professor Julie Byles & Dr Gita Mishra

Collaborators
Dr Margaret Harris & Professor Kichu Nair

Funding
Quality Use of Medicines Evaluation Program, Department of Health and Aged Care

Sleep disturbance and sleeping medication use among older Australian women

Sleeping difficulty and sleeping medication use represent a significant burden of illness for Australians, especially older women, and there is a need for research into sleep and sleeping medication for these women. This study was designed to provide a picture of the prevalence of sleeping medication use, and to identify factors related to sleeping medication use. The study was undertaken in close consultation with older women experiencing sleeping difficulties, and it is envisaged that effective health promotion strategies to minimise sleeping disturbance and its consequences will be developed from the findings.

The first phase explored attitudes to sleeping difficulties and sleeping medication use through eleven individual interviews. Respondents said that sleep was very important and poor sleep impacted on their day-to-day functioning. Strategies to assist with sleep included sleeping medications for some women, who expressed fear of dependency. Respondents were not favourably disposed towards the use of medication. Despite the deleterious effects of poor sleep for these women, who described themselves as active and busy, the side effects of sleeping medications were seen as worse.

The second phase was an analysis designed to identify the persistence of sleeping difficulty and medication use in 10,430 older women from Survey 1 (when they were aged 70–75 years) to Survey 2 in 1999 and to explore the relationship between these factors and health-related quality of life scores, falls and other health care use. A majority of women (63%) endorsed one or more items related to sleeping difficulty at Survey 2. Overall, 42% reporting “waking in the early hours”, 26% “taking a long time to get to sleep”, 21% “sleeping badly at night”, 11% “lying awake most of the night” and 11% “worry keeping you awake”. Sleeping difficult at Survey 1 was a strong predictor of the same problem at Survey 2. Fifteen percent reported use of sleeping medication at Survey 2; those endorsing any item of sleep difficulty were 6.5 times more likely than others to use sleeping medication. On multivariate analysis, sleeping difficulty at Survey 1 predicted lower self-rated general health and mental health, and higher emotional-related role limitations (SF-36) at Survey 2. Use of sleep medication at Survey 1 predicted worse scores on the physical functioning, bodily pain, vitality, social functioning and general mental health SF-36 subscale scores. The use of sleep medication was also significantly associated with falls, accidents, and health service use.

The third phase involved a sub-study of 1300 women selected according to their reported sleeping difficulty and sleeping medication use at Survey 2. A total of 1011 women returned the surveys, an 84% response rate. Regardless of group, most women endorsed at least one of the Nottingham Health Profile Sleep Subscale items. Even in the “no drugs, no difficulty” group only 29% of women had no sleep-related problems. However, in the other groups less than 10% of women had no sleep-related problems at this time. Waking in the early hours of the morning was common across all groups. Sleeping badly at night and lying awake most of the night showed the strongest differences between groups. Women who reported sleeping difficulty at Survey 2 were also more likely to report that they could not sleep because of symptoms of pain, bad dreams, cough/snoring and difficulty breathing.

Sleep quality scores in the substudy were predicted by Survey 1 SF-36 subscale scores. They were also associated with all SF-36 subscale scores in the substudy after adjustment for Survey 1 SF-36, comorbidity and Geriatric Depression Scale scores.

Respondents tried a variety of strategies to help them sleep, with the most common being reading, listening to the radio, and having a hot drink. Very few reporting using alcohol to help them sleep, which reflects a very low use of alcohol in this age group overall. Some of those women with sleeping difficulties took tea or coffee as an aid to sleep, which is unlikely to be effective and is against recommendations for promoting sleep. However, comparison of the number of cups of tea, coffee or cola consumed by women with and without sleeping difficulty, and the timing of the last drink containing caffeine before bed-time, showed no differences. A majority of women with sleeping problems had used prescribed medications and of those currently using medications, 60% were taking these medications 3 or more times per week.

Combining the results of all three phases of the study, the following conclusions are emerging.

- Sleep disturbance is a common and persistent complaint
- Use of sleeping medications is a common and persistent behaviour
- There are differences in the sleep-related behaviour and attitudes of women who do and do not use drugs that could be useful in the design of future health promotion campaigns.

Diabetes and Health Care

WHA Investigators
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Funding
Diabetes Australia

Quality and accessibility of health care for women in Australia with diabetes

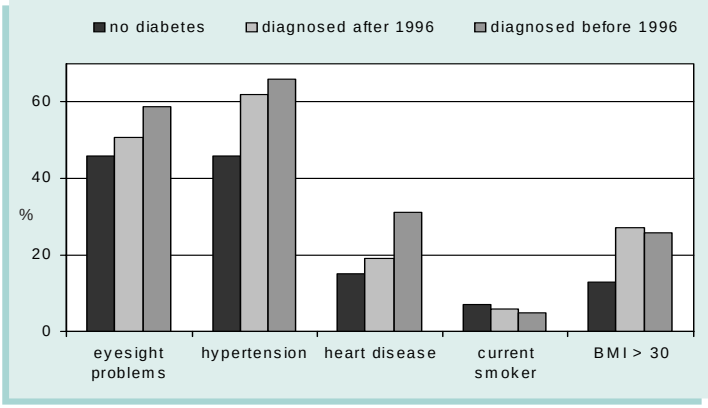
This project combines main survey data, substudy data, and Health Insurance Commission records of health service use, to explore the health and health service use of Australian women with diabetes.

Stage 1

Aim: To report on the prevalence of diabetes; risk factors for diabetes (such as inactivity, overweight and obesity); and the health, functional status and access to health care services for women with and without diabetes, by analysing data obtained from Survey 1 and Survey 2 of mid-age and older women in the ALSWH project.

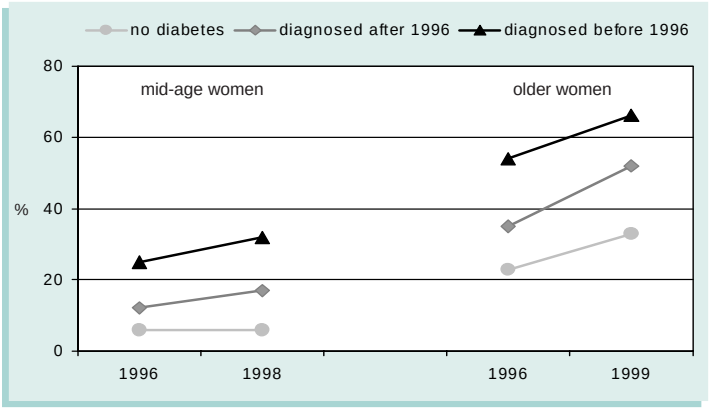
Progress: Analysis has been conducted to examine the health and characteristics of women with and without diabetes. Women who were diagnosed with diabetes after 1996 (new cases) were more like those who already had diabetes (existing cases) than like those who did not have diabetes. They were significantly more likely to have hypertension and to be overweight in 1996 (i.e. before their diagnosis of diabetes), than women without diabetes.

Comorbidity and risk factors at Survey 1 (1996) Older women



The proportion of older women who reported using four or more prescribed medications increased between Surveys 1 and 2, regardless of diabetes status. However, women with diabetes reported higher rates of medication use than women without diabetes.

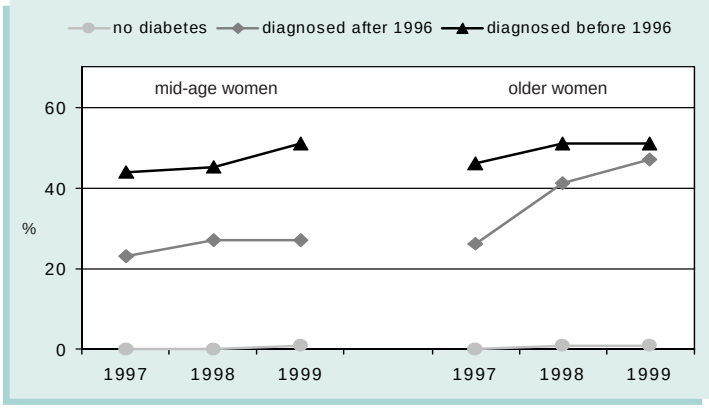
Percentage of mid-age and older women taking 4 or more prescribed medications



Stage 2

Aim: To examine the use of general practitioner and specialist services, out of pocket costs and use of best practice guidelines for HbA1c, lipids, microalbuminuria and retinal screening for women in the ALSWH with diabetes, using Medicare/Department of Veterans' Affairs data.

Progress: The Medicare/DVA claims for the period 1997-1999 have been analysed according to the diabetes status of the mid-age and older women. Records of HbA1c tests suggest that less than half of the women with diabetes have had this test each year (these may be underestimates as they do not include tests conducted in hosptial).



Percentage of women with diabetes having at least one HbA1c test per year

Use of HbA1c testing appears to be increasing but rates of use remain lower than the recommendation that diabetics should generally have the test on an annual basis. The Medicare/DVA data also show that total cost for all Medicare services (outside hospital) was higher for women with diabetes.

Stage 3

Aim: To conduct a substudy of women with diabetes to assess diabetes-related health needs, access to and satisfaction with health care.

Progress: The substudy questionnaire was pilot tested during June and July 2001 and the revised survey was mailed to mid-age and older participants with diabetes during September 2001. This substudy will provide more detail on diabetic women's use of health services, experiences of complications and treatment side-effects, and general well-being. The information will be used to recommend strategies to assist Australians to live well with diabetes.

Completed Research Theses 2001

Completed PhD Theses

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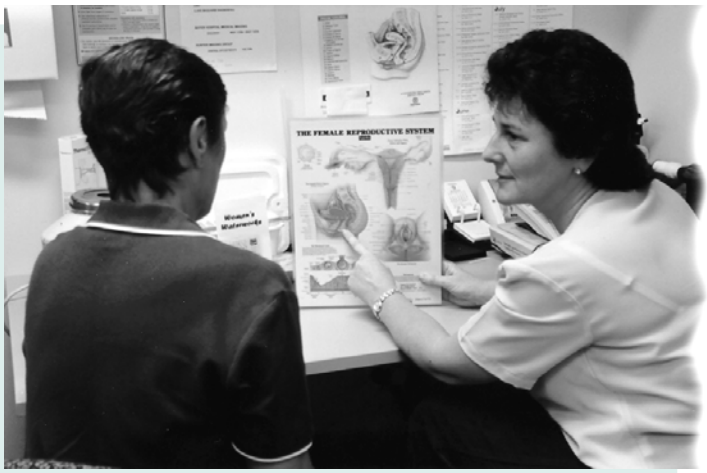
Supervisor
Professor Jill Cockburn

Psychological distress among midlife Australian women

This thesis has used a multidisciplinary perspective and qualitative and quantitative methods to explore mid-aged Australian women's perceptions and experiences of psychological distress, and in particular their experiences of seeking help for their difficulties. The high burden of illness for mental health problems in women is undisputed. However the diagnosis, aetiology and treatment of mental health problems is disputed territory, with the debate lying between extreme poles of the biomedical and social models of ill-health. The data used in this study came from Survey 1 of the mid-age cohort (n=14,000). Analysis was followed by a detailed substudy of a sample of women with low mental health scores, and three indepth interviews four years later. The substudy used semi-structured telephone interviews with 322 women to explore their perceptions and experiences of mental health problems. There were many perceived causes, and these were mostly in the social domain, especially family difficulties. Women's dissatisfaction with their main relationship was one of the most consistent predictors of poor mental health. Women consulted a wide variety of health professionals, with GPs the professionals most often consulted. Although most women reported fairly high levels of satisfaction with the responses of their GP, many were also critical of GPs in general, in terms of communication and caring, interest, knowledge and skills in mental health problems, an over-reliance on psychotropic medicines, and lack of holistic care. The assumption that GPs are the "best people" to treat mental health problems was questioned, and respondents identified a need for greater choice in health services, particularly for rural women. Finally, there was no single explanation, or remedy, for psychological difficulties in these women's lives. Stereotyped images of mid-aged women made unhappy by their empty nests or hormonal unbalance were not supported by these women's stories of their lives.



Female urinary incontinence in Australia: prevalence and prevention in postpartum women

Underpinning this PhD is an examination of the basic science of continence and a review of the international and Australian literature pertaining to the prevalence of urinary incontinence. Although there have been few studies that have evaluated the prevalence of female urinary incontinence in the Australian population, the available studies suggest that incontinence is a morbid and costly condition.

The Women's Health Australia project provided an opportunity to obtain current data on the prevalence of leaking urine and associated factors in a large representative sample of Australian women. The prevalence of leaking urine in cohorts of women aged 18-23, 45-50 and 70-75 years was estimated to be 12.8% (CI: 12.2 - 13.3), 36.1% (CI: 35.2 - 37.0), and 35% (CI: 34.1 - 35.9) respectively.

Despite the burden of illness imposed by urinary incontinence, to date there has been no evidence to support the concept of primary continence promotion as an effective method of preventing urinary incontinence. Therefore, a major aim of this thesis was to examine this approach. Given that trauma to the pelvic floor following childbirth appears to be related to the development of incontinence, postpartum women were chosen as the target group.

Evidence from the literature and expert opinion were combined with the conceptual framework of the Health Belief Model to develop the components of a continence promotion program. The effectiveness of an intervention delivered by physiotherapists to postpartum women was evaluated using a randomised controlled trial among 720 women. Multivariate analyses, that controlled for potential residual confounding effects of maternal, delivery, and continence variables, indicated that women in the intervention group were 40% less likely to report incontinence at three-months postpartum than women in the control group (Odds ratio=0.6, 95% CI: 0.5 - 0.9, p=0.01). Women in the intervention group were more likely than women in the control group to report that they were performing the recommended pelvic floor exercises (p=0.001).

The intervention was also found to be acceptable to women and its components were well utilised. This suggests that the intervention could feasibly be provided for women who deliver in hospitals where physiotherapists are employed.

Student
Dr Pauline Chiarelli, DipPhysio, GradDipHlthSocSci, MMedSci(HProm), PhD
Faculty of Medicine and Health Sciences, University of Newcastle

Supervisor
Professor Jill Cockburn

Completed Masters Theses

Student
Ms Fiona Campbell
BA, GradDipHthSci (Women's Health), MHthSci(Women's Health)
Discipline of Behavioural Science in Relation to Medicine, University of Newcastle

Supervisor
Dr Libby Campbell

Predicting body dissatisfaction amongst young women

Objectives

To estimate the prevalence of dissatisfaction with weight and shape amongst the 18-23 year old group (divided into underweight, average and overweight groups based on their reported Body Mass Index (BMI)) participating in Survey 1 of the Women's Health Australia project. The second aim was to develop a profile of women dissatisfied with either weight or shape in the three BMI categories, by assessing the relationship between dissatisfaction and the following variables: demographic information, perceptions of current weight and size, use of weight control methods, lifestyle behaviours and perceived health status variables. The project was a subsidiary analysis of Survey 1 data from 13,716 women in the younger cohort who were not pregnant.

Results

40.2% of underweight women (BMI<20), 60.7% of average weight women (BMI 20-24.9) and 82.1% of overweight (BMI 25+), were dissatisfied with their weight and/or shape. Logistic regression modelling showed that for all BMI groups, women who considered themselves overweight, women who wanted to weigh less and women who had used dieting methods in the past month, were most likely to be dissatisfied. These models showed that a greater likelihood of dissatisfaction was also associated with: higher Life Events Score (underweight and average weight women); a poorer mental health score (overweight women); rural rather than urban location (average and overweight women); and being an ex-smoker rather than a non-smoker (underweight women).

Conclusion

Body dissatisfaction is common among young Australian women within all BMI categories, but is most prevalent among those with a BMI of 25+. Associations with dieting behaviour, cognitions relating to weight and mental health are apparent.

Psychological predictors of successful ageing in a cohort of Australian women

Student
Ms Nadine Smith, BSc(Hons), MMedStats

Supervisors
Professor Christina Lee & Dr Anne Young

Aims

The project's main aim was to examine the extent to which the intrapersonal factors of optimism (the inclination to anticipate the best possible outcome) and health-related hardiness (a sense of control over one's health) allow us to explain the variance in older women's subjective health and well-being and perceived stress, over and above that which is explained by physical health, socioeconomic status, social support and healthcare access.

Methods

The study sample comprised the 9,501 women in the older cohort who completed the longer version of Survey 2. The explanatory variables of optimism and health-related hardiness were examined using the revised Life Orientation Test and the Health-Related Hardiness Scale, respectively. The eight subdimensions of the SF-36 measured the outcome variable of subjective health. Potential confounding variables of physical health, socioeconomic status, social support and access to healthcare were included in the analyses. Data were analyzed using descriptive statistics, chi-square analysis, Pearson correlations, factor analysis, multiple regression and structural equation modeling.

Outcomes

Positively phrased items tended to group together on the Life Orientation Test (optimism); the negatively phrased items also tended to group together (pessimism). This suggests that optimism and pessimism are related but distinct constructs, and not opposite ends of a continuum. Positively phrased items tended to group together on the Health-Related Hardiness Scale; the negatively phrased items also tended to group together. This suggests that the positively phrased items and the negatively phrased items on the Health-Related Hardiness Scale measure related but distinct constructs. Optimism and health-related hardiness explained 12% of the variance in older women's general health and mental health SF-36 scores, over and above that which is explained by physical health, socioeconomic status, social support and healthcare access. Structural equation models fitted using LISREL revealed moderate associations between optimism, pessimism and hardiness, and the outcome variables of general and mental health. These relationships provided general confirmation of the regression analysis. However, the structural models did not support the inclusion of variables associated with socioeconomic status, social support and healthcare access.

This project indicates that personal characteristics are important in predicting older women's well-being. The extent to which social and family factors might strengthen women's capacity to meet the challenges of ageing is an important question with theoretical and practical implications.

Other Projects 2001

WHA Investigators
Professor Christina Lee & Ms Anne Russell

Effects of physical activity on emotional well-being among older Australian women: cross-sectional and longitudinal analyses

This analysis was designed to explore relationships between physical activity and mental health, cross-sectionally and longitudinally, among older Australian women. Data from the older cohort at Surveys 1 (1996) and 2 (1999) were used. Cross-sectional data were analyzed for 10,063 women and longitudinal data for 6,472. Women were grouped into four categories of physical activity at each time and four physical activity transition categories across the three-year period were also defined. Outcome variables for the cross-sectional analyses were the mental health component score, and mental health subscales, of the SF-36. The longitudinal analyses focused on changes in these variables. Confounders included the physical health component scale of the SF-36, marital status, body mass index, and life events. Adjustment for baseline scores was included for the longitudinal analyses.

Cross-sectionally, higher levels of physical activity were associated with higher scores on all dependent variables, both with and without adjustment for confounders. Longitudinally, the effects were weaker, but women who had made a transition from some physical activity to none generally showed more negative changes in emotional well-being than those who had always been sedentary, while those who maintained or adopted physical activity had better outcomes.

The data indicate that physical activity is associated with emotional well-being among a population cohort of older women both cross-sectionally and longitudinally, supporting the need for the promotion of appropriate physical activity in this age group. Causal relationships between changes in emotional health and changes in physical activity are not clear, but women who are physically capable of exercise are likely to benefit emotionally from physical activity.

Making time

This study is part of a larger project that aims to develop an understanding of the role of leisure in women's lives, and the relationships between leisure, well-being and gender relations. Leisure is commonly associated with that part of life where individuals exercise 'freedom of choice'. As a corollary, leisure time is generally characterised by liberation from the constraints associated with employment, domestic work and other social obligations. As a number of writers have observed, leisure is seen as an avenue for the promotion of health through physical activity and through the psychological benefits associated with enjoyable leisure activities and sociability.

Over the last 20 years, many researchers have focused their attention on understanding the relative impact of constraints on leisure behaviour. With respect to leisure it is clear that so called 'free choices' are generally undertaken within a framework of constraints both explicit (e.g. available time, money, access to facilities and programs) and hidden (e.g. cultural expectations of what is 'appropriate' behaviour) and that for women, in particular, patterns of work and family circumstances, access to free time and discretionary income, the availability of social support (from partners, family and friends), and beliefs about motherhood and individual entitlement to leisure have been crucial influences on women's participation or non-participation in leisure activities. While recognizing the limitations that are often placed on individual leisure, recent research has proposed that constraints may be negotiable and that people may use a range of strategies to achieve their leisure goals with beneficial outcomes for women's health.

As a follow-up study to the 'Women and Leisure 2000' project, this sub-study is using time diaries and telephone interviews with women (and their partners) from the young and mid-age cohorts to explore issues relating to constraints on women's leisure, and the ways in which constraints are negotiated within households. These data will also be used to examine associations between leisure, lifestyles, social support and health.

WHA Investigators
Professor Wendy Brown, Emeritus Professor Lois Bryson & Dr Penny Warner-Smith

Collaborator
Associate Professor Peter Brown (Department of Leisure and Tourism Studies, University of Newcastle)

Funding Source
Research Management Committee, University of Newcastle

WHA Investigators
Dr Gita Mishra &
Associate Professor
Margot Schofield

Risk of elder abuse predicts health service use among older women: Women's Health Australia study.

The effectiveness of the brief, self-report Vulnerability to Abuse Screening Scale (VASS) in predicting health service use over three years was examined among 10,421 women aged 73-78 in the Women's Health Australia study. This study provides the first clear evidence of a long term impact of emotional and psychological abuse on health service use among older women, even when controlling for a large number of confounders.

The findings have important implications for health service providers who need to enhance their recognition of psychological abuse. Through accurate detection by easily administered brief scales such as the VASS, it may be possible to understand factors that may be adversely affecting older women's health.

WHA Investigators
Emeritus Professor
Lois Bryson &
Professor Christina
Lee

Collaborator
Dr Barbara Pocock
(Department of
Social Inquiry,
University of
Adelaide)

The relationship between work (paid and unpaid) and health, well-being and life quality

Researchers at the Centre for Labour Research (CLR), Adelaide University, have undertaken an analysis of the WHA data in relation to the effect of long hours of work on women's health. This analysis provides a background for the CLR's analysis of further interviews which they undertook in research commissioned by the Australian Council of Trade Unions. That qualitative study has been completed with the title '50 Families: What unreasonable hours of work do to Australians, their families and their communities' (see ACTU web site: actu.asn.au).

The analysis of the WHA data was used to inform the researchers' approach to questions and as general background. The research team found some relationships in the WHA data that suggested that longer hours of work were associated with some negative effects on women's health, and plan to return to this analysis at a later date.

WHA Investigators
Associate Professor
Julie Byles & Dr Gita
Mishra

The differential experience of ageing for women in urban, rural and remote parts of Australia

The main aim of this study was to compare three-year changes in health outcomes for older women living in urban, rural and remote parts of Australia. A secondary aim was to identify the proportion of women who move to more urban areas during this period, and the factors associated with this change of residence, with the hypothesis that those who move to more urban areas had poorer initial health status.

At Survey 1 the majority (60%) of the 10,382 women in the older cohort lived outside capital cities or other metropolitan areas. At Survey 2, 275 (3%) women had moved to more urban areas. After adjustment for other factors in the models, several health and social factors were related to women's area of residence, or whether they had moved. There was a significant trend for women who moved to have more symptoms than women who remained in their original locational classifications. Also, compared to women who did not move, and who recorded significant increases in SF-36 Mental Health Component scores, women who moved had no significant increase in these scores. Among women who remained in their original location, there was a significant trend for the increase in Mental Health scores to be greater with increasing remoteness.

Predictably, perceived access to health care decreased with increasing remoteness, and those who moved recorded scores that were consistent with women in capital cities and metropolitan areas. Similarly, satisfaction with general practitioner services was significantly higher for women in capital cities and other metropolitan areas. Conversely, women in rural and remote areas used more community services than women in capital cities or metropolitan areas.

There was a significant trend for neighbourhood satisfaction to increase from urban to remote areas, and women who moved between surveys reported the lowest scores at Survey 2. Similarly, while there was mean negative change in social support (DSSI) scores recorded for all areas, the greatest decrease was among women who moved to more urban areas.

Women living in rural and remote areas at both times, were less likely to have post-school qualifications, and more likely to be born in Australia than women in capital cities. Those who moved, however, were similar to women in capital cities in educational level.

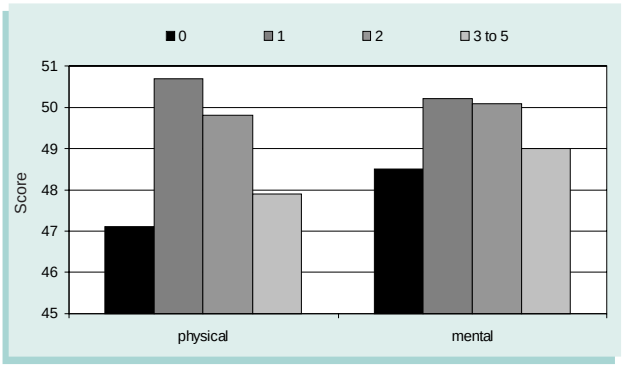
Clearly, one advantage of ageing and not moving is the ability to retain social support networks. In this analysis, those women who moved had a greater reduction in their level of social support than women who remained in more rural areas. This difference in social support was not evident at Survey 1 and seems to be a consequence of moving rather than a cause of the move.

In this cohort, the majority of women who remarried did not move location. However, those women who did move had poorer health, and reported less social support, lower neighbourhood satisfaction and used fewer services. This highlights a gap between a need and the amount of help and support available. These women may constitute a group at high risk of poor longer-term health outcomes.

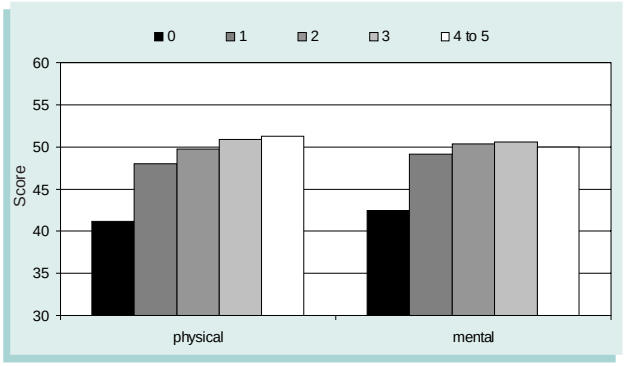
WHA Investigators
Professor Christina Lee & Ms Jennifer Powers

Social roles, health and well-being in three generations of Australian women

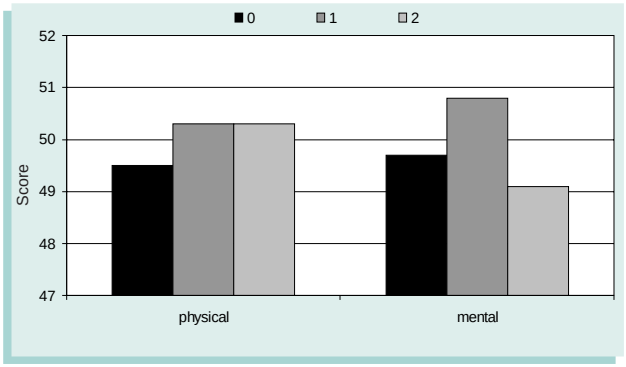
The relationship between multiple social roles and health is a particular issue for women, who continue to take major responsibility for childcare and domestic labour despite increasing levels of involvement in the paid workforce. This analysis of Survey 1 data explored relationships between role occupancy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



Physical and mental component scales of the SF-36 for young women with varying numbers of social roles (student, worker, mother, partner, caregiver).



Physical and mental component scales of the SF-36 for mid-age women with varying numbers of social roles (student, worker, mother, partner, caregiver).



Physical and mental component scales of the SF-36 for older women with varying numbers of social roles (partner, caregiver)

Student Projects 2001

Students

Psychosocial risk factors for pregnancy and pregnancy risk-taking in late adolescent females: A Women's Health Australia longitudinal inquiry

This study aims to identify psychosocial risk factors of late adolescent pregnancy and pregnancy risk taking. Two stages to this project will be combined in order to achieve this aim. Firstly, existing WHA data from Surveys 1 and 2 of the young cohort will be analysed. Variables such as depression, self-esteem, geographical location, socio-economic status, educational qualifications, and vocational aspirations, will be examined as possible predictors of subsequent adolescent pregnancy and contraceptive use. Secondly, a substudy will be conducted, in which approximately 100 of the youngest women from the young cohort will be surveyed to determine their level of pregnancy risk-taking. Pre-existing information on their psychosocial status will then be used to identify possible risk and protective factors for this risk-taking behaviour, which is defined as inconsistent and non-optimal use of contraception. The findings from this study will be used to inform future Australian research and to provide recommendations for adolescent pregnancy prevention efforts.

PhD Candidate
Ms Lauren Miller-Lewis (School of Psychology, Flinders University of South Australia)

Supervisors
Dr Tracey Wade & Professor Sue Richardson

WHA collaborator
Professor Christina Lee

Funding Source
Australian Postgraduate Award

Completion Date
March 2004

Young women, multiple roles and mental health: an investigation of epidemiological and lay perspectives

The study will investigate the impact of multiple social roles on the mental health of young Australian women, with particular emphasis on maternal and employment roles. The study aims to:

1. Describe the association between social roles and mental health longitudinally;
2. Identify the model/s of role occupancy that best explain the association between social roles and mental health among young Australian women;
3. Identify the psychological, social and structural factors that young women with maternal and employment roles consider significant to undertaking their social roles.

The study will use quantitative (aims 1 and 2) and qualitative (aim 3) methods. At present a literature review is being undertaken to identify the appropriate theoretical approach to address the third aim.

PhD Candidate
Ms Beverley Lloyd (Dept of Public Health and Community Medicine, University of Sydney)

Supervisors
Associate Professor Susan Quine & Professor Christina Lee

Completion Date
December 2004

PhD candidate
Ms Deborah Loxton (School of Health, University of New England)

Supervisor
Dr Rafat Hussain

WHA collaborators
Associate Professor Margot Schofield & Professor Christina Lee

Funding Source
Australian Postgraduate Award, University of New England

Completion Date
August 2002

Mediating factors in the relationship between domestic violence and physical health

Initial quantitative analysis of Mid-age Survey 1 data indicated that women who had ever lived in a violent relationship had worse physical and psychological health than others. Furthermore, stress, number of life events, level of available social support, education, income management, and smoking mediated the relationship between domestic violence and health. Alcohol use did not mediate this relationship affect but ever having had five or more drinks on one occasion did mediate this relationship. Information about the recency, frequency, and severity of violence, and duration of the violent relationship was not discernible from Survey 1. Also, the temporal sequence of events with regard to the mediating factors could not be obtained from Survey 1.

To determine the context and temporal location of domestic violence and to further elaborate on the occurrence of the mediating factors, qualitative telephone interviews are currently being conducted with women from the mid-age sample who have left a violent relationship and have agreed to participate in research on this topic. To date, 27 interviews have been conducted. The interviews should be fully transcribed by January 2002. Qualitative data analysis will follow.

Coping with abuse in adult relationships: mid-age women's perspectives

Evaluation of Australian women's experiences of abuse and its effect on health and well-being continues to be the primary focus of this PhD thesis. Data from Surveys 1 and 2 of the mid-age cohort have been used to assess the health-related practices, socioeconomic status, and ethnicity of women who participated in the WHA abuse substudy conducted in 1999. A comparison of these women with non-abused women from the main cohort on these components has also been conducted. Those who report a history of abuse tend to be in poorer health, make more use of health services, and are higher users of prescription drugs, cigarettes and alcohol. The next stage of this ongoing research will be qualitative assessment of respondents' insights and observations from the 1999 survey. The information derived will be used to assess individual differences in coping with abuse, and to identify positive strategies used by women to manage and deal with experiences of abuse.

PhD Candidate
Ms Glennys Parker (Research Centre for Gender and Health, University of Newcastle)

Supervisor
Professor Christina Lee

Completion date
February 2003

Factors influencing weight change in mid-aged women

This study is addressing the question of why many women gain weight in mid-life (45-55 years) through analysis of the main WHA survey results and a nested cohort study of weight change in menopausal women. Univariate analysis of the relationship between menopausal status and total body fatness (measured by body mass index) in the mid WHA cohort (N=14,100) shows that women in the late stages of peri-menopause (amenorrheic for 3 months but less than 12 months) have significantly higher body mass index than women at other stages of menopause, even after controlling for age, location, smoking and exercise. Longitudinal analysis of weight gain according to menopause category is currently being conducted.

In the nested cohort study, 875 women completed a survey containing pre-validated instruments measuring dietary intake, physical activity, emotional eating and questions relating to lifestyle that might affect weight in mid-aged women. Differences between the "weight gainers" (51% of the nested cohort) and non-weight gainers (49% of the nested cohort) are currently being investigated. Analysis of dietary intake measured by a food frequency questionnaire (FFQ) has shown trends, but there were no significant differences in intake of energy, fat, or any nutrients for weight gainers versus non-weight gainers. However, the non-weight gainers were more likely to report having made changes in food choice consistent with the dietary guidelines over the preceding three years. Analysis is continuing on other components of the survey.

PhD Candidate
Ms Lauren Williams (Discipline of Nutrition and Dietetics, University of Newcastle)

Supervisors
Professor Wendy Brown & Dr Anne Young

Funding Source
Research Management Committee, University of Newcastle

Completion date
2002

PhD Candidate
Ms Gabrielle Rose (Key Centre for Women's Health in Society, University of Melbourne)

Supervisors
Professor Lenore Manderson & Professor Jake Najman

Funding Source
Partial funding from Merck Sharp and Dohme

Completion Date
June 2002

Queensland women's lay perceptions of asthma

Aim

The aim of the study is to describe women's personal experiences of asthma, how they diagnose and manage their asthma, their treatment strategies, and the impact of asthma on their quality of life.

Population

The sub-study consisted of a sample of 239 mid-aged WHA participants from urban, rural and remote areas of Queensland. Women who had answered positively to the question "Have you ever been told by a doctor you have asthma?" at Survey 1 were selected for the asthma substudy.

Methods

The study uses a combination of qualitative and quantitative research techniques. The first step involved in-depth interviews with 10 women with asthma to ensure that the study was grounded in lay perceptions of asthma. From these interviews and with the use of existing asthma questionnaires, a new questionnaire was developed and sent to women with asthma. Follow-up in-depth interviews were conducted with a smaller sample of the same women who had mild, moderate and severe asthma and who were from rural, remote and metropolitan regions. Four indigenous women with asthma were interviewed. The principal focus of the research was on women with asthma, however, people involved in asthma policy, practice and research were interviewed as well. Other methods included participant observation at hospitals, conferences, forums, critical reflexive journal entries, critical analysis of existing literature, and case presentations. The sub-study data are currently undergoing analysis and integration with the qualitative data.

Outcomes

The results are now emerging and indicate that:

- 97% of the women have taken asthma medication which indicates that the substudy was a relatively representative sample of women with asthma
- 70% were over 20 years of age when first diagnosed with asthma
- 88% were over 20 when they first took reliever medication
- 30% were treating their asthma with alternative and complementary methods of treatment only.

SF-36 scores from Survey 1 were utilised to investigate some characteristics of women with asthma.

- The self-reported health of the women with asthma was poorer than the rest of the population across all eight subscales - physical functioning, physical role functioning, bodily pain, general health, vitality, social functioning, role emotional and mental health.
- Women with asthma, who were married or in a partnership experienced better health than those who were single, divorced, separated, or widowed. Sixty two percent of the women were employed either on a full time or part time paid basis. Those who were in paid work experienced better health than those who were not. This pattern of better health among partnered women and those with paid work is also found among those without asthma.

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

The rate of childlessness amongst women, and the number of women choosing this life course, continues to be of interest in Australia. Fertility rates in developed countries have been dropping steadily for decades, and it is predicted that the proportion of Australian women who will not give birth to a child will increase. Results from WHA, however, indicate that 91% of the older and mid-age cohorts have had children, and 91% of the younger cohort intend to have at least one child by the age of 35. This project aims to provide a better understanding of childlessness amongst mid-age Australian women, to investigate the range of feelings that these women may have about their childless status, and to look at the role of choice in their reproductive outcome. A substudy, currently in the planning stage and a questionnaire, will be sent to childless mid-age women.

PhD Candidate
Ms Heather McKay (Key Centre for Women's Health in Society, University of Melbourne)

Supervisors
Dr Jane Fisher & Professor Christina Lee

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

Completion Date
October 2003

PhD Candidate
Ms Melissa Graham (School of Health and Environment, La Trobe University, Bendigo)

Supervisors
Dr Erica James & Dr Helen Keleher

Funding Source
La Trobe University Bendigo Research Committee

Completion Date
October 2003

Women with menstrual symptoms, treatments tried, hysterectomy and satisfaction with outcomes

Hysterectomy is one of the most common gynaecological surgical procedures performed of a non-obstetric nature. Australian statistics indicate that just over one in ten women will undergo a hysterectomy by the age of 40, and around one in five women will undergo a hysterectomy before the age of 50. The appropriateness of hysterectomy to treat non-malignant conditions has been debated in recent years. A variety of procedures, less dramatic than hysterectomy, are available to treat menstrual symptoms successfully. A woman's level of satisfaction is one measure of the successful treatment of symptoms. Other factors such as socio-economic status, social support, geographical location and education, menopause, emotional and sexual consequences, may also influence satisfaction. To investigate these issues, two studies are being conducted.

The first is a prospective cohort study which aims to determine women's satisfaction with the outcomes of hysterectomy compared to alternative treatments. Baseline data for the prospective study have been collected and the follow-up data are currently being collected.

The second study is a retrospective cohort study and aims to determine women's reasons for electing to have a hysterectomy. The retrospective study data collection stage has been completed and data analysis are currently under way. The preliminary results indicate that the women are generally satisfied with their hysterectomy decision and outcome. However, very few of the women had tried other treatments for their menstrual symptoms prior to hysterectomy. It is interesting to note that those women who did try other treatments for their menstrual symptoms were also satisfied with these treatments.

PhD Candidate
Ms Nadine Smith (School of Population Health, University of Queensland)

Supervisors
Professor Annette Dobson, Professor Wendy Brown & Professor Gail Williams

Funding Source
Australian Postgraduate Award, University of Queensland

Completion Date
August 2004

Coping with the transition to widowhood: a statistical analysis

Aims

To undertake methodological research to refine statistical tools that can be used to examine the complex relationships between personal characteristics and environmental factors among participants in the Australian Longitudinal Study on Women's Health. A further aim of this project is to identify factors associated with successful management of the transition to widowhood, and factors that predict a poor outcome of this major life change.

Method

The study sample will include women in the older cohort (70-75 years at Survey 1, N=12,767). Seven hundred women in this cohort became widows between Survey 1 (1996) and Survey 2 (1999). Survey 3 for this cohort will be conducted in 2002. It is anticipated that about 500 women will have become widows between Survey 2 and Survey 3. To explore predictors of adjustment to widowhood, a number of statistical challenges have to be faced. Identification of groups of inter-related variables and investigation into the robustness of such groups will be conducted using the multivariate methods of factor analysis, cluster analysis, and split samples. The identification of stable groups of related variables is needed to assist the use of multiple imputation of missing data and in the definition of composite variables. Statistical modelling of the

adjustment to widowhood will involve differing numbers of observations among the women (due to time of widowhood relative to survey occasions), repeated measurements over time, and composite predictor variables representing each of the main groups of correlated variables. Multilevel mixed models will be used to model time-varying effects.

Psychological factors in coronary heart disease

The first part of the PhD aimed at identifying psychosocial factors that were significant predictors of the report of a new manifestation of self-reported coronary heart disease (CHD) in elderly women over a 3 year period. Low scores on the Mental Health Index (from the SF-36), low levels of social support (Duke Social Support Index) and high Perceived Stress were all significant predictors of the self-reported diagnosis of CHD. These variables remained significant even after controlling for the frequency of GP visits and other significant risk factors (BMI, alcohol status, nutritional risk and having hypertension). The second and third parts of the PhD involve more detailed study of Brisbane women with angina, building on the findings from the initial analysis.

The second part of this study involves surveying patients hospitalised for angina. Time 1 (n=208) and Time 2 (3 month follow-up, n=145) surveys have been completed. Time 3 (12 month follow-up) survey will be completed by March 2002.

A pilot study (n=30) for the third study has been completed. This involves surveying a community sample of angina patients as well as measuring changes in blood pressure and heart rate variability at rest and when given mild mental stressors.

PhD Candidate
Mr Esben Strodl (School of Psychology, University of Queensland)

Supervisor
Associate Professor Justin Kenardy

Completion Date
August 2002

PhD Candidate
Ms Sandra Bell (Research Centre for Gender and Health, University of Newcastle)

Supervisor
Professor Christina Lee

Funding Source
Faculty of Science & Mathematics and Research Centre for Gender and Health Scholarship, University of Newcastle

Completion Date
December 2003

The transition to adulthood and health

Four key indicators of the process of transition to adulthood (work/study; living arrangements; relationships; parenthood) are being studied. Current analysis is working towards describing where participants were with respect to these four areas of their lives at Survey 1 and Survey 2, and the changes that have occurred between the two. The project focuses on the timing of transitions in each of these domains (eg. age of leaving family of origin) and their relationships to stress, health and health behaviours. The health behaviours of participants have been analysed using cluster analysis.

The substudy planned for 2002 will use both quantitative and qualitative measures to explore the timing and spacing of these four key indicators of the process from late adolescence to early adulthood and the relation of this to physical and mental well-being. The analyses completed by the end of 2001 will be used to select participants for the substudy.

PhD Candidate
Ms Lisa Milne (Department of Sociology and Anthropology, University of Newcastle)

Supervisors
Dr Deirdre Wicks & Dr Gita Mishra

Funding Source
Departmental Grant, University of Newcastle

Completion Date
November 2002

Young women, health, class, neighbourhood and health

This project focuses on the aspirations of young women for employment, motherhood and the combination of the two. It explores the extent to which sociocultural factors such as socioeconomic status (SES) affect young women's life plans, and the ways in which they envisage a future for themselves and their families.

Aims, Methods and Outcomes so far

Building on a qualitative study completed last year, the project's present phase employs a quantitative survey instrument, with room for additional qualitative input, which is designed to determine the generalisability of results obtained in the qualitative phase of the study. The larger population targeted in this phase of data gathering allows for the strength of certain relationships between indicators (SES and location) and outcomes (aspirations for children, work, relationships and education) to be tested.

The survey has only recently been sent to participants; the response rate to date is around 50%.

Publications 2001

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

Hasan S, Byles JE, Mishra G & Harris MA. Use of sleeping medication, and quality of life, among older women who report sleeping difficulty. Australasian Journal on Ageing, 2001; 20: 29-35.

Objective: To estimate the proportion of older women who report sleeping difficulties and/or use sleeping medication; and to identity associated factors.
Method: Cross sectional survey of Australian women aged 70-75 years. These women were participants in the Australian Longitudinal Study on Women's Health (ALSWH) randomly selected from the Australian Medicare database.
Results: Of the 12624 women aged 70-75 years who provided data for this analysis (36% response rate), 50% (n=6042) reported sleeping difficulty "never/rarely"; 33% (n=3979) "sometimes"; and, 17% (n=201 1) of women reported to experience sleeping difficulty "often". Approximately 18% (n=2287) of women reported using sleeping medication within the previous four weeks. Women reporting sleeping difficulty "sometimes" were over five times more likely to be taking sleeping medications than women who reported to "never/rarely" experience difficulties (p=<0.0001); while women reporting difficulty sleeping "often" were over 15 times more likely to be using sleeping medications (p=<0.0001). Mean scores for sub scales of the SF-36 health-related quality of life measure were significantly lower for women reporting sleeping difficulty and women using sleeping medication (p=<0.001). Similarly, there was an inverse relationship between the SF-36 physical and mental health summary scores and difficulty sleeping or sleeping medication use.
Conclusions: Self-reported sleeping difficulty is significantly related to reduced quality of life, suggesting sleeping difficulty is not a benign complaint. After adjustment for other explanatory variables there were strong, clinically significant differences between the SF-36 scores of women reporting sleeping difficulty. However, while this association is statistically, and clinically significant, it is not clear whether sleeping difficulty reduces quality of life, or whether quality of life interferes with sleep, or whether both problems are a result of other associated conditions. Further longitudinal exploration of this relationship is necessary. Further, issues need to be explored with older women, with a view to identifying acceptable and effective alternatives to sleeping medication use.

Kenardy J, Brown WJ & Vogt E. Dieting and health in young Australian women. *European Eating Disorders Review* 2001; 9: 242-254.

This paper examines the prevalence of dieting behaviours and correlates with physical and mental health in young Australian women who are participants in the Australian Longitudinal Study on Women's Health. 14,686 women aged 18-23, randomly selected from the National Medicare data-base, with over-sampling from rural and remote areas, responded to a questionnaire seeking dieting and health information. The results showed that 66.5% of the women had a BMI within the healthy weight range (18- <25 kg/m2). However only 21.6% of these women were happy with their weight and almost half (46%) had dieted to lose weight in the last year (also one in five who had a BMI <18.5 kg/ m^2). High frequency of dieting (rather than dieting *per se*) and earlier dieting onset were associated with poorer physical and mental health (including depression), more disordered eating (bingeing and purging), extreme weight and shape dissatisfaction and more frequent general health problems. The results suggest that there is a need for programmes which will enhance self esteem and weight/shape acceptance and promote more appropriate strategies for maintenance of healthy weight.

Doran CM, Chiarelli P & Cockburn J. Economic costs of urinary incontinence in community-dwelling Australian women. *Medical Journal of Australia*, 2001; 174: 456-458.

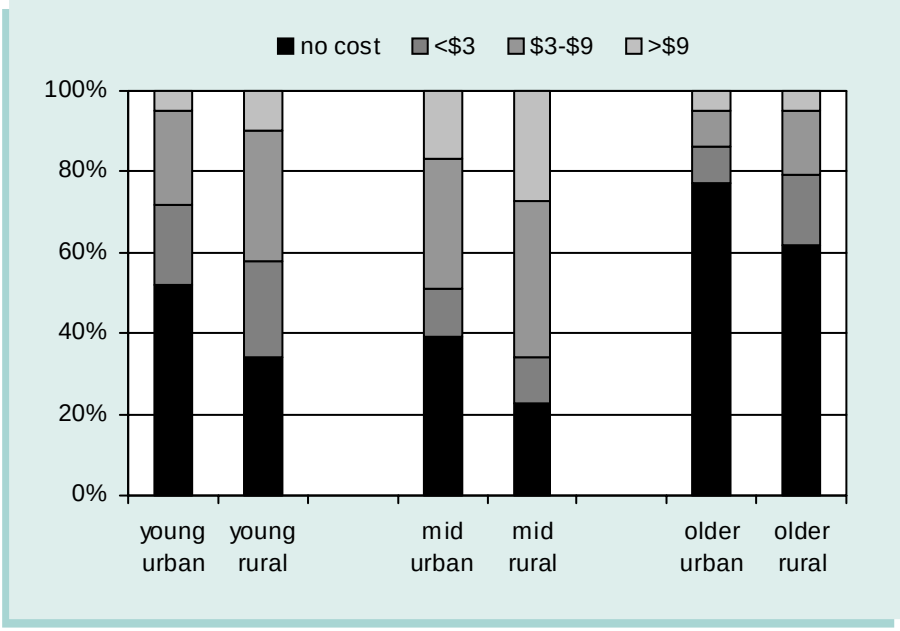
Objective: To estimate the economic cost of urinary incontinence in community-dwelling Australian women for the year 1998.
Design: Micro level costing approach.
Setting: Urinary incontinent community dwelling Australian women.
Patients, Participants: Urinary incontinent women 18 years of age and over.
Interventions: The framework integrates evidence of the prevalence of urinary incontinence among Australian women aged over 18 years, together with the resource implications (both personal and treatment) of their incontinence, in an attempt to quantify the economic costs of urinary incontinence.
Main outcome measure: Australian dollar cost in 1998.
Results: An estimated 1,835,628 community dwelling women over the age of 18 years were incontinent of urine in 1998. The total annual cost of urinary incontinence in 1998 is estimated at $710.44 million or $387 per incontinent woman that is comprised of $338.47 million in treatment costs and $371.97 million in personal costs. Extrapolating 20 years hence, holding constant both prevalence of incontinence and inflationary pressures, the total cost is projected to be $1,267.85 million of which 93% ($1.18 billion) will constitute costs associated with incontinent women aged over 40 years.
Conclusions: The results of this analysis demonstrate that: 1) urinary incontinence imposes a considerable drain on scarce health care resources in Australia; and, 2) there exists a need for research to facilitate a clearer understanding of the magnitude of the problem and potential gains from the pursuit of continence promotion.

Young AF, Dobson AJ & Byles JE. Health services research using linked records: who consents and what is the gain? *Australian and New Zealand Journal of Public Health,* 2001; 25: 417-420.

Objective*:* To assess consent to record linkage, describe the characteristics of consenters and compare self-report versus Medicare records of general practitioner use.
Method*:* Almost 40,000 women in the Australian Longitudinal Study on Women's Health were asked for permission to link their Medicare records and survey data.
Results*:* 19,700 women consented: 37% of young (18-23 years), 59% of mid-age (45-50 years) and 53% of older women (70-75 years). Consenters tended to have higher levels of education and, among the older cohort, were in better health than non-consenters. Women tended to under-report the number of visits to general practitioners.
Conclusions*:* Record linkage of survey and Medicare data on a large scale is feasible. The linked data provide information on health and socioeconomic status which are valuable for understanding health service utilisation.
Implications: Linked records provide a powerful tool for health care research, particularly in longitudinal studies.

This study investigates the use of general practitioner services by women in Australia. Although there is a universal health insurance system (Medicare) in Australia, there are variations in access to services and out of pocket costs for services. Survey data from 2350 mid-age (45-50 years) and 2102 older (70-75 years) women participating in the Australian Longitudinal Study on Women's Health were linked with Medicare data to provide a range of individual and contextual variables hypothesised to explain general practitioner use. Structural equation modelling showed that physical health was the most powerful explanatory factor of general practitioner use. However, after adjusting for self-reported health, out of pocket cost per consultation was inversely associated with use of services. The out of pocket cost was generally lower for women with low socioeconomic status but cost was also directly related to geographical remoteness. Women living in more remote areas had higher out of pocket costs and poorer access to services. Women who reported better access to care were more likely to be satisfied with their most recent general practice consultation and less likely to be sceptical of the value of medical care. These results show the need for health policies that improve the equitable use of general practitioner services in Australia.

Young AF, Dobson AJ & Byles JE. Determinants of general practitioner use among women in Australia. *Social Science and Medicine*, 2001; 53: 1641-1651.



Out of pocket cost per GP consultation 1995-1996

Patterson AJ, Brown WJ & Roberts DCK. Dietary and supplement treatment of iron deficiency results in improvements in general health and fatigue in Australian women of childbearing age. *Journal of the American College of Nutrition*, 2001; 20: 337-342.

Objective: To examine the effects of iron deficiency, and its treatment by iron supplementation or a high iron diet, on fatigue and general health measures in women of childbearing age.
Design: Randomised controlled trial to compare supplement and dietary treatment of iron deficiency.
Subjects: 44 iron deficient (serum ferritin <15mg/L or serum ferritin 15-20mg/L, plus two of: serum iron <10 mmol/L; total iron binding capacity >68 mmol/L; or transferrin saturation <15%) and 22 iron replete (haemoglobin ≥120g/L and serum ferritin >20mg/L) women, aged 18-50 years were matched for age and parity.
Interventions: Iron deficient women were randomly allocated to either iron supplementation or a high iron diet for 12 weeks.
Measures of Outcome: Iron deficient and iron replete participants had iron studies performed and completed the Piper Fatigue Scale (PFS) and the SF-36 general health and well-being questionnaire at baseline (T0), following the 12 week intervention (T1) and again after a 6 month non-intervention phase (T2). The SF-36 includes measures of physical (PCS) and mental (MCS) health and vitality (VT).
Results: MCS and VT scores were lower, and PFS scores were higher for iron deficient women (diet and supplement groups) than iron replete women at baseline. Both intervention groups showed similar improvements in MCS, VT and PFS scores during the intervention phase, but mean increases in serum ferritin were greater in the supplement than the diet group. PCS scores were not related to iron status.
Conclusions: Treatment of iron deficiency with either supplementation or a high iron diet results in improved mental health and decreased fatigue among women of childbearing age.

Data from the Australian Longitudinal Study on Women's Health, now known as Women's Health Australia (WHA) show that young rural women's life experiences and aspirations are very different from those of their city cousins, suggesting that national policies need to take rural women's needs into account. For example, young rural women are more likely to be married or in a permanent relationship, more likely to have children, and are also more likely than young city women to want three or more children by the time they are 35 years old. Given the earlier age at which they become mothers, and their relative lack of post-school qualifications, young rural women may be disadvantaged if they attempt to return to the workforce after childbearing and possibly a period spent at home with small children.

This paper examines the possible implications of young rural women's life choices for their continued well-being in the current economic climate. Their situation is likely to be exacerbated by on-going processes of restructuring and the dismantling of infrastructure which are disadvantaging people in rural areas, and it is argued that there is a particular need for supportive social policies which enable young rural women to make choices about parenting, relationships and paid work.

Warner-Smith P & Lee C. Hopes and fears: the life choices, aspirations and well-being of young rural women. *Youth Studies Australia*, 2001; 20: 32-37.

Age- and gender-specific measures of socio-economic status (SES) in Australia were investigated using data from the 1995 National Health Survey. Factor analysis produced consistent results that were interpreted in terms of five conceptually meaningful domains (employment, housing, migration, family unit and education). Age- and gender-specific SES scores based on these factors had stronger associations with physical and mental health, as measured by the component summary scores of SF-36, than either an area based index or scores derived only from males aged 40-45 years. Overall the results supported the hypothesis that SES measures composed of social and demographic items exhibit important age- and gender-specific differences which are relevant for health.

Mishra GD, Ball K, Dobson AJ, Byles JE & Warner-Smith P. The measurement of socio-economic status: Investigation of gender-and age-specific indicators in Australia: National Health Survey '95. *Social Indicators Research,* 2001; 56: 73-89.

Patterson AJ, Brown WJ & Roberts DCK Dietary and lifestyle factors influencing iron stores in Australian women: an examination of the role of bioavailable dietary iron. *Australian Journal of Nutrition and Dietetics*, 2001; 58: 107-113.

Background: Research to date has not been able to adequately describe the relative impact of dietary and lifestyle variables on iron status. While total iron intake appears unrelated to iron status, bioavailable dietary iron should correlate with iron stores, after adjustment for iron losses.
Objective: To determine dietary and lifestyle variables which are important in the determination of iron status for Australian women of childbearing age.
Design: Serum ferritin and body mass index were measured in 52 iron deficient and 24 iron replete women. Dietary data were collected using 7-day weighed food records and bioavailable dietary iron calculations were performed using the methods of Monsen et al and Tseng et al. Self-report data on demographic characteristics, parity, breastfeeding, oral contraceptive pill (OCP), intrauterine device and hormone replacement therapy use, menstruation, smoking, alcohol intake, exercise, dieting, vitamin and mineral supplement use and blood donation were collected. Multiple linear regression was used to examine dietary and lifestyle factors associated with serum ferritin.
Results: Current OCP use (0.01) and alcohol intake (0.001) were positively associated and phytate intake was negatively associated (0.05) with serum ferritin in multiple linear regression. Total iron, heme iron and bioavailable dietary iron intakes were not associated with iron stores.
Conclusions: Factors other than dietary iron, such as alcohol and phytate intake, and use of the OCP may be important in the aetiology of iron deficiency.

Lee C. Experiences of family caregiving among older Australian women. *Journal of Health,* in press.

This paper uses quantitative and qualitative methods to examine the effects on family caregiving on physical and emotional wellbeing, finances and leisure among a cohort of Australian women aged 70 to 75. A total of 11,939 women, of whom 10% (N=1,235) identified themselves as caregivers for frail, ill or disabled family members and 168 made open-ended comments about their experiences, was examined. Unlike other surveys with younger respondents, the data failed to demonstrate any differences in physical health between caregivers and others. They were, however, significantly more likely to have low levels of emotional well-being and to feel stressed, rushed and pressured. Qualitative analysis supported the value of the concept of the “ethic of care” in understanding the social and individual forces which propel vulnerable older women into providing family care despite its demonstratively negative effects on their wellbeing.

Objective: To identify women's health and social needs immediately following the death of their husband.
Method: Follow-up survey of 430 widowed women participating in the Australian Longitudinal Study on Women's Health.
Results: Surveys were returned by 340 women (79%) and 231 of these women had been widowed three years or less. While 81% of the 231 women still lived in their own homes, 19% had moved house since being widowed for financial or social reasons. There were prevalent needs for legal services (44%), and home maintenance (55%). Assistance from medical practitioners included understanding (54%), support (32%) and information (20%). Thirty percent said they had received medication to assist their bereavement, and 30% had taken medication to help them sleep or "for their nerves" within the four weeks prior to survey. Most women (85%) felt they had maintained or increased their level of social contact since becoming widowed.
Conclusion: Widowed women have broad needs for practical help and advice. Appropriate services for widowed women need to encompass the social context in which widowed women are attempting to reconstruct their lives.

Feldman S, Byles J, Mishra G & Powers J. The health and social needs of recently widowed older women in Australia. *Australasian Journal on Ageing*, in press.

Objectives: To examine associations between nutrition screening checklists and the health of older women.
Methods: The Australian Nutrition Screening Initiative (ANSI), adapted from the Nutrition Screening Initiative (NSI), was completed by 12,939 women aged 70-75 years as part of the Australian Longitudinal Study on Women's Health. Responses to individual items in the checklist, and ANSI and NSI scores, were compared with measures of health and health service utilization. The performance of an unweighted score (TSI) was also examined.
Results: Women with high ANSI, NSI and TSI scores had poorer physical and mental health, higher health care utilization and were less likely to be in the acceptable weight range. Whereas ANSI classified 30% of the women as 'high risk', only 13% and 12% were classified as 'high risk' by the NSI and TSI respectively.
Conclusions: Higher scores on both the ANSI and NSI are associated with poorer health. The simpler unweighted method of scoring the ANSI (TSI) showed better discrimination for the identification of 'at risk' women than the weighted ANSI method. The predictive value of individual items and the checklist scores need to be examined longitudinally.

Patterson AJ, Young AF, Powers JR, Brown WJ & Byles JE. Relationships between nutrition screening checklists and the health and well being of older Australian women. *Public Health Nutrition,* in press.

Warner-Smith P & Imbruglia C. Motherhood, employment and health: is there a deepening divide between women? *Just Policy*, in press.

This paper addresses the issue of the "deepening socio-economic divide" between the "haves" and "have-nots" in Australian society. The divide reflects divergence in patterns of motherhood and employment. It involves a developing polarisation between young women who have an interest in getting further education, pursuing a career, and deferring motherhood, and young women who have not been particularly interested in school, or who see femininity as equated with demonstrable sexuality and motherhood and do not aspire to further education. This paper presents data from Women's Health Australia that illustrates the differences between young women who become mothers at an early age and those who do not. The analysis suggests that young women who wish to consolidate their career options are postponing motherhood, or possibly relinquishing it altogether, whereas those without good labour market prospects are turning to early motherhood, in effect by default. Such a choice is likely to lock young mothers into long-term socio-economic disadvantage and, given the demonstrated centrality of employment to women's well-being, there are implications for the long-term health of young mothers. Clearly there is a need for more supportive policies which will help to bridge the growing divide among Australian women by enabling all young women to choose how they wish to achieve their aspirations for both motherhood and employment.

Bryson L. Motherhood and gender relations: where to in the twenty-first century? *Just Policy*, in press.

In Australia, the birthrate is just under 1.8, and fertility issues and motherhood are becoming a focus of interest for both academics and policy makers. This paper sets motherhood within its broad historical context, and discusses young women's aspirations about motherhood at a time when public concern about falling birth rates may well generate pressures for policies which deliberately encourage women to have more babies. Relevant empirical research findings, which have already been published, are drawn from the Women's Health Australia study. They relate specifically to women's aspirations about family size and career, and use of contraception. The data are used to reflect specifically on issues relating to fertility and motherhood and

their complex and contradictory implications for social policy in Australia at the beginning of the twenty-first century. The bigger picture demonstrates a degree of change which challenges most former taken-for-granted notions of family and parenthood. This changing context would render futile any attempt to prevent further decline in fertility by trying to recapture a largely mythological era of women living in 'contented suburban domesticity'. The extent of change also suggests that even sensible and modest policy approaches, such as promoting family friendly workplace policies, while necessary, alone are not likely to be adequate either for arresting the decline in fertility or for promoting women's rights to freely choose the direction of their lives.

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

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

The Australian Longitudinal Study on Women's Health was established to track the health of three age cohorts of Australian women - 40,000 in total - over a 20 year period. It provides opportunities for research into health and related issues for women. In this paper, we investigate (1) baseline data from the young cohort of 1400 survey participants and (2) follow up in-depth interview data from a small sample of 100 of the original respondents. The focus of the paper is on the aspirations of young women (aged 18-23) for work, their ideal job, relationships (including children) and further education, particularly in the context of gender inequality in labour markets. Through an analysis of the data, we look at the extent to which gender inequalities are the result of free choices and preferences and to what extent they are conditioned by socio-economic structures and processes that reproduce inequalities over time. This issue is further explored through a classification of women by socio-economic status. In this way, we can analyse the gender dimension of labour market inequality in general as well as the relationship of gender inequality to class inequality in the areas of work, work choice and the ability to combine work and family responsibilities. Analysis of the two data sets sheds light on debates about women's workforce participation as well as establishing baseline data for future research on the options chosen and available for this group of young women. The information will have significance for policy debates in several areas, including those concerned with worker entitlements, childcare, access to higher education and workforce planning. More particularly, it makes a significant contribution to current debates about women's alleged preference for part-time rather than full-time work.

Wicks D, Mishra G & Milne L. Young women, work and inequality: is it what they want or what they get? An Australian contribution to research on women and workforce participation. Edited by P. Black, N. Crossley, C. Fagan, M. Savage, & L. Turney. *Proceedings from the British Sociological Association Conference: 2001. Globalisation and Social Capital,* in press.

Brown WJ & Miller YD. Too wet to exercise? Leaking urine as a barrier to physical activity in women. *Sports Medicine,* in press.

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

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

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

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

Little systematic research has been conducted in Australia to develop a picture of women's experiences of violence and abuse across their lifetimes. The present study was designed to address this deficiency by assessing the prevalence of different types of abuse, the situations in which they occur, how women have coped, and the effect of abusive encounters on general health and well-being. Using self-report questionnaires, data were obtained from 1159 women aged 48-53, previously recruited in the Women's Health Australia longitudinal project. The most frequently reported forms of abuse were emotional, physical and sexual. Measures included descriptors of the abuse, the SF-36 physical and mental health summary measures, GHQ-12, and the CES-D depression scale. Abuse overwhelmingly occurred in the home, and across all life stages, but mostly in adulthood, and most commonly on an occasional or weekly basis. Almost all perpetrators were persons known to the victim, and most abusive encounters had persisted over time. The majority of women had discussed their circumstances with close relatives, friends, or professional persons. Those who had discussed the situation with counsellors or psychologists found it most helpful. One-third of respondents had reported abusive episodes to the police, and almost half of these had found it helpful to do so. The data show that abuse is a fact of life for many Australian women, and demonstrate a continuing need for appropriate prevention and intervention strategies. It is recommended that wider recognition of gendered abuse, the parameters within which it is experienced, and its impact on psychological functioning would be useful for policy and procedural development by social welfare agencies and private consultants.

Parker G & Lee C. Violence and abuse: an assessment of mid-aged Australian women's experiences. *Australian Psychologist,* in press.

Background*:* In the 1996 baseline surveys of the Australian Longitudinal Study of Women's Health (ALSWH) 12.8% of young women (18-22 years), 36.1% of mid-age women (45-50) and 35% of older women (70-75) reported leaking urine. However, the majority of women who experience leaking urine do not appear to seek help for the problem.
Aims*:* To establish the determinants of help-seeking behaviour, treatments suggested by health care professionals (for those who sought help), and satisfaction with treatment outcomes among women in each age group who reported leaking urine at baseline.
Methods*:* Five-hundred participants were randomly selected from women in the young (aged 21-26 in 1999), mid-age (48-53) and older (72-79) cohorts of the Australian Longitudinal Study of Women's Health (ALSWH) who had reported leaking urine in a previous survey. Details about Urinary Incontinence (UI) (frequency, severity, and situations), advice or treatment for the problem, and perceived changes in leakage over time were sought through self-report mailed follow-up surveys.
Results*:* Response rates were 50%, 83%, and 80% in the young, mid-age and older women respectively. Most respondents had leaked urine in the last month (78%, 94%, and 91% of young, mid-age and older women respectively), but only 20%, 57%, and 54% of young, mid-aged, and older women respectively had sought help or advice about managing UI. The most common reasons for not seeking help were that the women felt they could manage the problem themselves, or did not consider it to be a problem. Among those who did seek help, satisfaction was generally high. More than half of those who did pelvic floor exercises were satisfied with the outcome.
Conclusions*:* Strategies are needed to encourage women who experience UI to seek help. Health care professionals should be aware of the possibility of early onset and progression of UI, and make conservative treatment options available.

Miller YD, Brown WJ & Chiarelli P. Urinary incontinence in Australian women: barriers to and outcomes of help-seeking behaviours. *Public Health*, in press.

Presentations 2001

Byles JE, Harris MA, Mishra G & Nair K

Older women's use of sleeping medications.

Australian Association of Gerontology Rural Conference Showcasing the Hunter and Beyond.

Morpeth, New South Wales.

16 February 2001.

Mishra G, Dobson A & Richardson K

Multiple imputation for Body Mass Index: sensitivity analysis from the Australian Longitudinal Study on Women's Health.

Annual European Royal Statistical Society Meeting.

Belgium.

16 February 2001.

Lee C, Bryson L, Young A, Byles J, Keleher H, Broom D & Taft A

Bridging the research-policy gap in Women's Health Workshop.

Australian Women's Health Network 4th Australian Women's Health Conference "Women's Health: Politics, Action and Renewal".

Adelaide, South Australia.

18 February 2001.

Graham M, Keleher H, James E & Byles J

Satisfaction with the outcomes of hysterectomy.

Australian Women's Health Network 4th Australian Women's Health Conference "Women's Health: Politics, Action and Renewal".

Adelaide, South Australia.

19-21 February 2001.

Lee C

Women's Health Australia: Introduction. Symposium: Women's Health Australia: Focus on rural women throughout the lifespan.

6th National Rural Health Conference.

Canberra, Australian Capital Territory.

4-7 March 2001.

Young A, Dobson A & Byles J

Access to health services in urban and rural Australia: a level playing field? Symposium: Women's Health Australia: Focus on Rural Women Throughout the Lifespan.

6th National Rural Health Conference.

Canberra, Australian Capital Territory.

4-7 March 2001.

Warner-Smith P & Lee C

Young rural women: life choices, aspirations, and well-being. Symposium: Women's Health Australia: Focus on Rural Women Throughout the Lifespan.

6th National Rural Health Conference.

Canberra, Australian Capital Territory.

4-7 March 2001.

Young A & Byles J

A sense of belonging: how do you measure it and does it matter? Symposium: Women's Health Australia: Focus on Rural Women Throughout the Lifespan.

6th National Rural Health Conference.

Canberra, Australian Capital Territory.

4-7 March 2001.

Lee C, Mishra G, Brown W & Dobson A

Symptoms during the menopausal transition: demographics, lifestyle, and country of birth in an Australian population survey.

Building Bridges from Science to practice and Policy: Behavioral medicine in the 21st Century. Society of Behavioral Medicine 22nd Annual Scientific Sessions.

Seattle, Washington, USA.

21-24 March 2001.

Wicks D, Mishra G & Milne L

Young women, work and inequality: Is it what they want or what they get? An Australian contribution to research on women and workforce participation.

British Sociological Association Conference: 2001 A Sociological Odyssey.

Manchester, United Kingdom.

9-12 April, 2001.

Lee C & Young A

Women's Health Australia.

25th Congress of the Medical Women's International Association.

Sydney, New South Wales.

19-22 April 2001.

Young A

Women's Health Australia: the Australian Longitudinal Study on Women's Health.

National Benchmarking Group Meeting - Women's Hospital Australasia.

Sydney, New South Wales.

17 May 2001.

Brown WJ, MacDonald M & Hanratty AM

Primary health care research capacity building: Translating research into practice using results from the WHA study.

Embedding research in practice. 2001 General Practice and Primary Health Care Research Conference.

Adelaide, South Australia.

31 May – 1 June 2001.

Byles J, Feldman S & Mishra G

The health and social transitions for recently widowed older Australian women: a longitudinal study.

Global Aging: Working together in a changing world. 17th World Congress of the International Association of Gerontology.

Vancouver, Canada.

1-6 July 2001.

Schofield MJ & Mishra GD

Vulnerability to elder abuse: predicting health outcomes among older Australian women.

Global Aging: Working together in a changing world. 17th World Congress of the International Association of Gerontology.

Vancouver, Canada.

1-6 July 2001.

Warner-Smith P & Brown P

The town dictates what I do: the leisure and well being of rural mid-age women.

5th Australian and New Zealand Association for Leisure Studies Biennial Conference.

Perth, Western Australia.

2-4 July 2001.

Brown P & Warner-Smith P

Mothers and daughters – exploring generational differences in women's attitudes to leisure and time.

5th Australian and New Zealand Association for Leisure Studies Biennial Conference.

Perth, Western Australia.

2-4 July 2001.

Brown WJ

The benefits of physical activity during pregnancy.

Invited address to the National Sport and Pregnancy Forum (Australian Sports Commission).

Sydney, New South Wales.

1 August 2001.

Lee C & Powers J

Social roles, health and well-being in three generations of Australian women.

15th European Health Psychology Conference.

St Andrews, Scotland.

6-9 September 2001.

Strodl E, Kenardy J & Aroney C

Prediction of the new diagnosis of CHD in elderly women: A prospective study using psychosocial and non-psychosocial risk factors.

Australian Cardiac Rehabilitation Association's National Conference.

Tewantin, Queensland.

7-9 September 2001.

Brown WJ & Trost SG

Socio-economic status, physical activity and obesity - does one size fit all?

Tenth Annual Scientific Meeting of the Australasian Society for the Study of Obesity.

Gold Coast, Queensland.

8-9 September 2001.

Kenardy J & Brown WJ

Adult lifetime weight variation and association with physical and mental health in mid-aged women.

Tenth Annual Scientific Meeting of the Australasian Society for the Study of Obesity.

Gold Coast, Queensland.

8-9 September 2001.

Williams L, Young A & Brown W

How eating influences weight gain in mid-aged women.

Tenth Annual Scientific Meeting of the Australasian Society for the Study of Obesity.

Gold Coast, Queensland.

8-9 September 2001.

Young A, Lowe J, Patterson A & Byles J

The burden of diabetes: findings from the Australian Longitudinal Study On Women's Health. Poster presentation.

Australian Diabetes Society - Australian Diabetes Educators Association (ADS-ADEA) Annual Scientific Meeting.

Gold Coast, Queensland.

12-14 September 2001.

Guillemin M & Brown WJ

Understanding risk: mid-age women and heart disease.

Joint Conference of the International Epidemiological Association and the Society for Social Medicine.

Oxford, United Kingdom.

12-15 September, 2001.

Guillemin M & Brown W

Mid-age women, heart disease and risk.

British Sociological Association, Medical Sociology Group.

York, United Kingdom.

21-23 September, 2001.

Byles J

Older women's use of sleeping medications.

33rd Annual Public Health Association of Australia Conference.

Sydney, New South Wales.

23-26 September 2001.

Young A & Powers JR

Using the Medicare enrolment file as a sampling frame: experiences of the Australian Longitudinal Study on Women's Health. Invited speaker for Workshop: Issues in Population Sampling.

Australian Epidemiological Association. 10th Annual Scientific Meeting.

Sydney, New South Wales.

27-28 September 2001.

Powers J, Mishra G, Young A

Effects of mode of administration on self-rated health in the mid-age cohort of the Australian Longitudinal Study On Women's Health. Poster presentation.

Australian Epidemiological Association. 10th Annual Scientific Meeting.

Sydney, New South Wales.

27-28 September 2001.

Young A, Lowe J, Patterson A & Byles J

Using record linkage in the Australian Longitudinal Study On Women's Health to study the impact of diabetes. Poster presentation.

Australian Epidemiological Association. 10th Annual Scientific Meeting.

Sydney, New South Wales.

27-28 September 2001.

Brown WJ, Trost SG & Miller YD

Life transitions and changing physical activity patterns in young women. Innovative approaches to understanding and influencing. physical activity.

Cooper Institute Scientific Conference.

Dallas, United States of America.

4-6 October 2001.

Brown W

The road less travelled - exercise and public health research for women. Invited address for A Sports Medicine Odyssey - Challenges, Controversies & Change.

Australian Conference of Science and Medicine in Sport.

Perth, Western Australia.

24-27 October 2001.

Jonas H, Hamilton M & Brown W

Measuring variable drinking patterns in young Australian women.

Combined Australian Professional Society on Alcohol and Other Drugs and National Methadone Conference.

Sydney, New South Wales.

28-31 October 2001.

Bell S & Lee C

Development of the Perceived Stress Questionnaire for Young Women.

Women & Psychology Interest Group 2001 Annual Conference.

Ashfield, New South Wales.

30 November - 2 December 2001.

Dobson A

Australian Longitudinal Study on Women's Health.

The Inaugural Queensland Health and Medical Scientific Meeting: Research for Better Health Outcomes.

Brisbane, Queensland.

4 December 2001.

Members of the NHMRC Project Advisory Committee

Professor Janet Greeley (Chair)

Executive Dean, Faculty of Social Sciences

James Cook University

Mr Andrew Benson

Acting Director, Office of Aboriginal and Torres Strait Islander Health

Department of Health and Aged Care

Dr Adele Green

Epidemiology Unit

Queensland Institute of Medical Research

Professor Christine Ewan

Deputy Vice Chancellor

University of Wollongong

Dr David Roder

Director of Epidemiology

South Australian Health Commission

Dr Helena Britt

Director, Family Medicine Research Unit

University of Sydney

Ms Jean Douglass

Acting Director, Evaluation Research Unit

Department of Health and Aged Care

Financial Statement 2001 - 2002

Expenditure January- December 2001
DHAC income July 2000 – June 2001
Based on University of Newcastle Finance One System 22/10/01
Accounts 593-1029 and 593-1023

INCOME			EXPENDITURE			
Source	**Details**	**Income**	**Items**	**Actual Expenditure 1/1/01 – 30/6/01**	**Actual Expenditure 1/7/01 – 22/10/01**	**Forward Estimate 23/10/01-31/12/01**
DHAC	Contract	828,000	Shared research (UQ)	45,000	45,000	0
			Surveys & data entry	38,700	33,463	8,542[a]
			Newsletter printing	0	18,280	0
			Data linkage (AEC, HIC)	4,770	0	1,589[a]
			Computer h'ware, s'ware	10,921	150	2,282[a]
			Equipment & maintenance	605	523	700[b]
			Postage & freight	9,827	35,626	6,000[b]
			Telephone	2,066	3,243	2,500[b]
			Printing, stationery, office supplies	2,040	1,347	1,000[b]
			General consumables/ Repairs	672	597	500[b]
			Travel/Hospitality	9,670	8,205	3,500[b]
			Salaries	185,529	127,175	78,354[a]
			On-costs	41,307	32,115	23,506[a]
			Annual Report	0	0	6,000[b]
			University O'head charge	55,350	65,430	0
U of N	Research Contribution	50,000	Postgraduate scholarships/ fees	20,512	10,652	7,000[a]
	Research Quantum	126,000	Postdoctoral Fellowship	7,434	0	0
			On costs	1,291	0	0
			Shared research (Principal Investigators)	7,421	1,293	5,707[a]
	Research Infrastructure Grant	2,783	Student research costs	10,841	3,246	3,000[b]
	Conference Travel Grants	2,400				
TOTALS		**$1,009,183**		**$453,956**	**$386,345**	**$150,180**
						$18,702

[a] *firm commitment*
[b] *figures are estimates*

Inquiries

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

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

Abstracts of all papers published, papers accepted for publication, and papers presented at conferences are also on the project website.

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