The Australian Longitudinal Study on Women's Health

Report 9

The University of Newcastle
29 September 1998

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SEPTEMBER 1998 REPORT

INTRODUCTION

This is the ninth report on the Australian Longitudinal Study on Women's Health, provided by the University of Newcastle and the University of Queensland, due in September 1998, as agreed in the extension to the first contract (which was completed in June 1998). In view of the recommendation in the report of the independent reviewers in May 1998, which suggested a move to annual reporting on the project, this report provides only summary data of project achievements in the last three month period.

This report is presented in two parts:

PART A - Progress at the University of Newcastle

PART B - Progress at the University of Queensland

PART A: UNIVERSITY OF NEWCASTLE

EXECUTIVE SUMMARY

1. The first follow-up survey for the mid-age cohort was conducted during March-June 1998. To date, the response rate is 85.5%. 900 women who previously indicated that they would return their follow-up survey, but who have not yet done so, will be contacted in the next two weeks in an attempt to decrease the attrition rate.

2. Comparison of demographic characteristics for those who have and have not responded at this stage suggests that the respondents to the follow-up survey are more likely to be: from rural areas, (especially in Tasmania, South Australia, Victoria, ACT and Queensland); married; born in Australia or another English-speaking country; and in managerial, professional, trade or administrative occupations. The respondents to date are also more likely to have had a Pap test in the last two years, and to score >50 on the SF-36 physical and mental component summary scores.

3. The survey for the first follow-up of the older cohort has been developed and is ready for pilot testing.

4. During June-September 1998, the researchers have presented 12 papers at national and international conferences and meetings.

5. Two papers previously accepted for publication have now been published, three papers previously submitted for publication have now been accepted and are 'in press'. A further three papers have been submitted, bringing the total number of publications prepared to 38 (main cohorts).

6. The 1998 newsletter has been developed and is ready for printing.

7. The report of the external reviewers has recommended ongoing funding for the project for a period of five yeas, with formal review at the end of the fourth year. The Minister for Health has agreed to continue funding for five years at $900,000 per annum. Negotiations with the DHFS are ongoing to develop a new contract for continuation of the study.

1 REVIEW OF PROGRESS (JULY - SEPTEMBER 1998)

1.1 SUMMARY OF ACTIVITIES

During the three months July - September 1998, researchers at the University of Newcastle have:

	see section:
• telephoned more than 5000 women to check change of name/address details and remind participants to return follow-up and sub-study surveys;	2.1 response to mid follow-up survey
• run checks on the data from the first follow up survey for the mid-age cohort, and run comparisons of respondents and non-respondents;	2.2 comparisons of data from respondents and non-respondents
• developed and carried out preliminary pilot testing of the first survey for the older cohort (planned for March 1999);	3.1 follow-up survey for older cohort (pilot)
• continued to analyse data from the baseline surveys, and prepared:	
- 12 papers for presentation to national/international conferences;	3.2 presentations
- three papers for submission to refereed journals.	3.3 papers submitted
• developed a newsletter for participants in the three main cohorts;	3.4 communication with participants
• negotiated with collaborators at the University of Queensland to develop performance indicators for the period July - December 1998.	3.6 letter for extension of current contract with UQ

1.2 ISSUES RELATING TO ONGOING FUNDING

In August 1998, following the report and recommendations of the external reviewers (Professor Christine Ewan and Professor Adele Green), the study team received a letter from the Minister of Health Dr Michael Wooldridge, indicating that funding for the study would continue at a level of $900,000 per annum for the next five years.

While the researchers were delighted to receive this news, it should be noted that the level of funding is 25% below that requested and recommended in the report from the external reviewers in May 1998. Given this shortfall in available funds, it will not be possible to conduct the study as detailed in the submission to the Department (1997), or in the report to the reviewers (1998). Therefore, unless additional funding can be found, it is likely that several modifications will have to be made to the proposed study plan for the next five years. These might include:

- reducing the number of National Advisory Committee meetings;
- cancelling the proposed scientific advisory group meeting in 2000;
- inability to archive the data (depending on cost);
- less frequent linkage to HIC data and other data sets (depending on cost);
- reducing the number of newsletters to one per year;
- reducing the number of contacts with participants; and, as a last resort
- reducing the number of cohorts.

1.2.1 Staff contracts

The reviewers recommended moving to a five year funding period to facilitate improved strategic planning and reduced turnover of research staff. It will however be impossible to offer 5 year contracts to all research staff, if funds to meet increasing salary rates cannot be assured. In view of CPI increases, and increases in award payments since submission of the funding proposal, as well as increases in the costs of goods and services, it is estimated that the cost of the project will increase by about 5% per annum over the next five years. Without funds to meet these increases, the number of staff (and hence the number and/or size of the cohorts, and/or the number of contacts with participants) will have to be reduced.

1.2.2 New contract

The report by the external reviewers has now been made available to the researchers. The recommendations will be considered in the development of the new contract for the period 1999-2003. The contract will be developed by the Department of Human Services and Health, in associated with the researchers and the NHMRC. It should be in place by December 1998.

2 FIRST FOLLOW-UP SURVEY OF THE MID-AGE COHORT

2.1 SUMMARY OF RESPONSES TO EACH STAGE OF THE SURVEY

	Planned date	**Actual date**	**Number sent**	**Response rate**
Mail out of surveys	9 March	9 March	13,468	-
Thank you/reminder	16 March	16 March	13,468	64.4%
Second reminder card	14 April	24 April	4795	76.5%
Telephone reminders	From 11 May	From 26 May	3159	85.4%
Completion of data collection	End May	Ongoing		

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2.2 DEMOGRAPHIC CHARACTERISTICS OF WOMEN WHO HAVE RESPONDED TO THE FIRST FOLLOW-UP, COMPARED WITH THOSE WHO HAVE NOT (AS AT 29 SEPTEMBER 1998)

Demographic characteristics of the respondents and non-respondents (29 September 1998) are shown in the following tables.

Table 2.1: Respondent vs non-respondent comparison for area

	Respondent		Non-respondent		Total
	n	%	n	%	n
Urban	3954	35.3	930	42.3	4884
Rural	6518	58.2	1095	49.8	7613
Remote	731	6.5	170	7.3	901
Missing	2	0.02	2	0.09	4
Total	11205		2197		13402

Table 2.2: Respondent vs non-respondent comparison for state

	Respondent		Non-respondent		Total
	n	%	n	%	n
NSW	3243	28.9	672	30.6	3915
VIC	2686	24.0	489	22.3	3175
QLD	2486	22.2	473	21.5	2959
SA	970	8.7	167	7.6	1137
WA	1000	8.9	243	11.1	1243
TAS	493	4.4	67	3.1	560
NT	193	1.7	58	2.6	251
ACT	132	1.2	26	1.2	158
Missing	2	0.02	2	0.09	4
Total	11205		2197		13402

Table 2.3: Respondent vs non-respondent comparison for marital status

	Respondent		Non-respondent		Total
	n	%	n	%	n
Married	9395	83.9	1687	76.8	11082
Separated/divorced/widowed	1408	12.6	414	18.8	1822
Never married	354	3.2	80	3.6	434
Missing	48	0.4	16	0.7	64
Total	11205		2197		13402

Table 2.4: Respondent vs non-respondent comparison for country of birth

	Respondent		Non-respondent		Total
	n	%	n	%	n
Australia	8556	76.4	1515	69.0	10071
Other English speaking	1519	13.6	266	12.1	1785
Europe	668	6.0	207	9.4	875
Asia	243	2.2	124	5.6	367
Other	93	0.8	44	2.0	137
Missing	126	1.1	41	1.9	167
Total	11205		2197		13402

Table 2.5: Respondent vs non-respondent comparison for level of education

	Respondent		Non-respondent		Total
	n	%	n	%	n
Uni/higher degree	1604	14.3	253	11.5	1857
Trade/certificate	2238	20.0	315	14.3	2553
< = HSC	7273	64.9	1587	72.2	8860
Missing	90	0.8	42	1.9	132
Total	11205		2197		13402

Table 2.6: Respondent vs non-respondent comparison for occupation

	Respondent		Non-respondent		Total
	n	%	n	%	n
Manual	1529	13.7	382	17.4	1911
Trade/admin	4726	42.2	819	37.3	5545
Manager/professional	4188	37.4	696	31.7	4884
Other	762	6.8	300	13.7	1062
Total	11205		2197		13402

Table 2.7: Respondent vs non-respondent comparison for manage on income

	Respondent		Non-respondent		Total
	n	%	n	%	n
Impossible	237	2.1	90	4.1	327
Difficult always	1278	11.4	340	15.5	1618
Difficult sometimes	3172	28.3	661	30.1	3833
Not too bad	4700	42.0	833	37.9	5533
It is easy	1758	15.7	252	11.5	2010
Missing	60	0.5	21	1.0	81
Total	11205		2197		13402

Table 2.8: Respondent vs non-respondent comparison for Pap smear test

	Respondent		Non-respondent		Total
	n	%	n	%	n
In last 2 years	8028	71.7	1423	64.8	9451
Not in last 2 years	3177	28.4	774	35.2	3951
Total	11205		2197		13402

Table 2.9: Respondent vs non-respondent comparison for SF-36 physical health summary score

	Respondent		Non-respondent		Total
	n	%	n	%	n
<25	254	2.3	87	4.0	341
25-<50	3576	31.9	762	34.7	4338
50-<74	6700	59.8	1142	52.0	7842
Missing	675	6.0	206	9.4	881
Total	11205		2197		13402

Table 2.10: Respondent vs non-respondent comparison for SF-36 mental health summary score

	Respondent		Non-respondent		Total
	n	%	n	%	n
<25	192	1.7	60	2.7	252
25-<50	3513	31.4	822	37.4	4335
50-<74	6824	60.9	1109	50.5	7933
Missing	675	6.0	206	9.4	881
Total	11205		2197		13402

Comparison of demographic characteristics for those who have and have not responded at this stage suggests that respondents are more likely to be from rural areas, married, born in Australia or another English-speaking country, and be in managerial, professional, trade or administrative occupations. The respondents are also more likely to have had a Pap test in the last two years, and to score >50 on the SF-36 physical and mental component summary scores.

It would appear that the attrition rate is higher for women from non-English backgrounds and lower socio-economic groups. Attempts are being made to contact these non-respondents and to encourage participation.

2.3 NEW DATA BOOKS

Data books with frequencies of responses to the baseline surveys for women in each State/Territory have been commissioned by NSW Health. These will be available by mid-October.

3 RESEARCH ACTIVITIES

During the period July - September 1998, researchers presented 12 papers at conferences. Two papers have been published, three papers have been accepted and are 'in press', and researchers have also prepared three papers for submission to journals for publication. Abstracts of presentations and papers submitted are included here.

3.1 PILOT FOR FIRST FOLLOW-UP OF THE OLDER COHORT

During this funding period, the researchers have developed and pre-pilot tested the follow-up survey for the older cohort. A copy of the pilot survey is show in Appendix 1.

3.2 PRESENTATIONS

Title:	**CURRENT PATTERNS OF ALCOHOL CONSUMPTION AND ALCOHOL-RELATED HARMS FOR WOMEN IN VICTORIA: IMPLICATIONS FOR HARM MINIMISATION**
Authors:	Helen Jonas, Cathy Banwell, Annette Dobson & Margaret Hamilton
Name of Conference:	Victorian Women's Health Conference, Melbourne, 9 – 10 June 1998

Introduction: In Australia, increasing attention is being focused on the vulnerability of women to long term health problems associated with harmful and hazardous drinking, the more immediate harms that may arise from heavy drinking episodes, and the increased rates of alcohol consumption by younger women. This paper will present current information on the drinking patterns of Victorian women, and the associates of drinking with lifestyle, emotional health, stress and life events, hospital admissions and serious casualty road accidents.

Methods: Data were obtained from the Australian Longitudinal Study on Women's Health (ALSWH), where more than 10,000 randomly selected Victorian women in three age groups (18-22 years, N=3729; 45-49 years, N=3293; 70-74 years, N=3221) which explored the place of alcohol in the lives of 525 women residing in an inner-city suburb; the Victorian Inpatient Minimum Database; and Vic Roads.

Results: In the ALSWH study, less than 5% and 1% of the women in all three age groups drank at hazardous and harmful levels. However, "binge drinking" was far more prevalent in the younger women (weekly or more: 19%; monthly or less: 58%) than in the

older age groups. The rates of higher risk drinking varied with demographics and lifestyle, and were associated with higher levels of mental and physical health problems; stress and stressful life events. In the Carlton study, 21% of the women were judged to be at risk of having problems associated with their drinking. During the 1995-1996 fiscal year, there were 4439 female hospital admissions attributable to hazardous/harmful drinking, and 24% of female drivers killed in road accidents had blood alcohol levels >0.05%.

Conclusions: These results reinforce the need for integrated approaches to the prevention and treatment of alcohol-related problems which take into account the impact of social and environmental factors on individual drinking practices and alcohol-related problems.

Title: **THE WOMEN'S HEALTH AUSTRALIA PROJECT AND POLICY DEVELOPMENT**

Authors: Lois Bryson

Name of Conference: Victorian Women's Health Conference, Melbourne, 9 – 10 June 1998

The aims of this presentation are to outline the nature of the Women's Health Australia (WHA) project and discuss some key findings that are of relevance for the development of a Victorian Women's Health Plan. The WHA study is planned to follow for 20 years the health of a national sample of around 42 000 women who in 1996 were in the age cohorts of 18-22, 45-49 and 70-74 years. The study involves a multi-disciplinary team, adopts a social approach to health, and focuses on biological, psychological, social and lifestyle factors and their relationship to women's physical health and emotional well-being, as well as examining the use of, and satisfaction with, health care services.

The base-line survey data indicate important differences between the three age cohorts and these do not always seem to be primarily associated with life course stage. Differences for example are marked in relation to stress, responses to services and attitudes to weight and shape. On each of these issues the young women responses are the most problematic: they experience more stress, are more dissatisfied with services and with their bodies. Contrasting findings for the age groups highlights the fact that here we have three generations born into very different eras, with different cultural experiences and different responses to social life. In turn this diversity is reflected in the health problems, needs and attitudes to health issues of the three age-groups. While some differences will no doubt, over the life of the study be shown to be associated with life course stage, the patterns are sufficiently distinct to suggest that this generational diversity will remain a fundamental issue for policy development. Our data suggest that in dealing with young, mid-aged and older women we must effectively deal with 'three worlds of women's health'.

Of importance for health policy too, are findings about the association of employment and health. This association is generally positive, though some forms of employment are problematic and a lack of access to employment is a key issue particularly for mental health. Not unexpectedly, tensions are evident between employment and family responsibilities, and these too are reflected in measures of mental health. The evidence to date suggests that as employment becomes increasingly normalised for women, the best

health outcomes will be achieved through policies which facilitate access to employment and ease the tensions between paid work and family responsibilities.

Title: **PREDICTORS OF BODY DISSATISFACTION AND DISORDERED EATING IN A COMMUNITY SAMPLE OF YOUNG AUSTRALIAN WOMEN**

Authors: Kylie Ball

Name of Conference: 5th International Congress of Behavioural Medicine, Copenhagen, 19 – 22 August 1998

The majority of young women in developed countries are discontented with their bodies, and a significant minority of these women develop serious eating disorders. This paper draws on a large-scale community survey to examine predictors and correlates of body dissatisfaction and of disordered eating.

Data from a nationally representative sample of 12,614 women aged 18-23 years, collected as part of the Women's Health Australia longitudinal survey, demonstrated significant correlations between self-reports of body dissatisfaction and disordered eating, and levels of stress, major life events, and depression. Following this, a sample of 500 women who reported disordered eating and 500 who did not was selected, and these women were surveyed on two occasions six months apart. Analysis demonstrated both cross-sectional and longitudinal relationships between stress, life events, depression, and symptoms of disordered eating.

These findings add to existing evidence, much of which has been based on small samples and has used exclusively cross-sectional designs, suggesting that women at risk of developing eating disorders may be identified and preventive measures taken.

Title: **GYNAECOLOGICAL PROCEDURES AMONG WOMEN IN URBAN, RURAL AND REMOTE AREAS OF AUSTRALIA: A VIEW FROM THE AUSTRALIAN LONGITUDINAL STUDY ON WOMEN'S HEALTH**

Authors: Julie Byles & Gita Mishra

Name of Conference: Royal Women's Hospital 60 Year Anniversary Conference, Brisbane, 10-12 September 1998

The Australian Longitudinal Study on Women's Health (Women's Health Australia) is a national study of factors affecting the health of three cohorts of women (aged 18-23, 45-50l 70-75 years at baseline). One key issue is women's access to and choice of health care. Issues for women in rural and remote areas are of particular interest, and women from these areas have been deliberately over-represented in the study.

Among the 14200 women in the middle cohort, 22% had had a hysterectomy prior to the baseline survey. Hysterectomy was more common among women in rural and remote areas. Women in remote areas were 25% more likely to have had a hysterectomy than women in urban areas, even after adjustment for differences in education level, parity and

other health care factors. There was also a strong association between hysterectomy and other gynaecological surgery (Adjusted OR: 6.36; 95% CI: 5.69-7.11).

Follow-up data collected in March 1998 will allow exploration of factors that predispose women to have a hysterectomy including menstrual symptoms, health related quality of life, and health care utilisation. Analysis of the relationship between these factors and women's area of residence will provide a much clearer index of access to gynaecological care for women in all parts of Australia.

Title: **THE AUSTRALIAN LONGITUDINAL STUDY ON WOMEN'S HEALTH**

Authors: Wendy Brown, Annette Dobson, Lois Bryson & Julie Byles

Name of Conference: 30th Annual Conference of the Public Health Association of Australia, Hobart, 13-16 September 1998

This longitudinal study began in 1996 with collection of baseline data from more than 42,000 women in three age cohorts (18-23 (N= 14762); 45-50 (N=14072) and 70-75 years (N=12767). Follow-up surveys are planned for three yearly intervals over the next twenty years, so that over a period of twenty years, we will have data from women aged 18-95 years. The central aim of the study is to identify those factors that promote and those that reduce good health for women, while a primary goal is to direct the findings towards the development of more appropriate and effective health policies for women. This paper will review early progress with the study and results which indicate that social, economic and technological change since the birth of the women in the oldest cohort has resulted in the three groups effectively living their lives within very different social contexts, with distinctive health impacts.

Title: **LEISURE TIME PHYSICAL ACTIVITY IN AUSTRALIAN WOMEN: RELATIONSHIP WITH WELL-BEING AND SYMPTOMS**

Authors: Wendy J Brown, Christina Lee, Gita Mishra & Adrian Bauman

Name of Conference: 30th Annual Conference of the Public Health Association of Australia, Hobart, 13-16 September 1998

Cross-sectional baseline data from the Australian Longitudinal Study on Women's Health (N = 14,762 young women (18-23 years); 14,065 mid-age women (45-50 years), 13,023 older women (70-75 years)) were used to assess associations between a physical activity (PA) score (derived from self reported (mailed survey) vigorous and less vigorous exercise), and indicators of health and well-being.

There were significant positive associations between PA score and SF-36 physical and mental health summary scores in each cohort ($p<0.001$). Odds ratios for reporting a range of symptoms were lower for women who reported low/moderate activity (eg for young women, OR for constipation = 0.76 (CI 0.65-0.89), for mid-age women, OR for tiredness = 0.70 (0.63-0.78), for older women, OR for clumsiness = 0.72 (0.64-0.81)) than for sedentary women. There was no threshold level of PA above which health benefits

appeared to increase significantly. The findings suggest that low/moderate levels of exercise are associated with a range of health benefits for women of all ages.

Title: **LEAKING URINE – PREVALENCE AND ASSOCIATED FACTORS IN AUSTRALIAN WOMEN**

Authors: Pauline Chiarelli, Wendy Brown & Patrick McElduff

Name of Conference: 30th Annual Conference of the Public Health Association of Australia, Hobart, 13-16 September 1998

The prevalence of leaking urine and associated variables were examined in three large cohorts of Australian women aged 18- 23 ('young' N= 14761), 45 - 50 ('mid-age' N=14070) and 70 - 75 ('older' N= 12893) years (participants in the Women's Health Australia project). The proportion of women reporting leaking urine was 12.8% (95% CI: 12.2 - 13.3), 36.1% (35.2 - 37.0) and 35% (34.1 - 35.9) in each of the three cohorts respectively. Logistic regression analysis showed significant associations between leaking urine and parity in the young and mid-age women, and between leaking urine and constipation, other bowel symptoms, body mass index and urine that burns or stings, in all three groups. In the mid-age and older cohorts, women who reported having both hysterectomy and prolapse repair, or prolapse repair alone, were also more likely to report leaking urine. Lower scores on the physical and mental component summary scores of the SF36 suggest lower quality of life among women who report leaking urine, compared with those who do not.

Title: **WOMEN AND LEISURE: DOES ALL WORK AND NO PLAY MAKE JILL UNWELL?**

Authors: Peter Brown & Wendy Brown

Name of Conference: World Leisure and Recreation Association Conference, Sao Paulo, Brazil, October 1998

Leisure time is characterised by liberation from the constraints of employment, domestic work and other social obligations. It affords time and space to relax and recuperate from the stresses and fatigue of daily activities; offers opportunities to express individuality and creativity; and provides an important context for the establishment and maintenance of social networks. It is also an avenue for the promotion of health, through physical activity and the psychological benefits of social leisure activities.

The Australian Longitudinal Study on Women's Health aims to clarify the relationships between biological, psychological, social and lifestyle factors and women's physical health and emotional well-being. Baseline surveys were completed in 1996 by more than 41,000 young, mid-age and older women. Among the mid-age women (45-50 years, N=13,595) one in five felt rushed, pressured or too busy every day, and 38% felt more rushed than five years ago. About half the women said they would like more time for passive (43.9%) and active (2%) leisure; while only 2% reported no passive leisure, 18.7% reported no active leisure.

These findings will be reviewed in the context of interrelationships between work and leisure in women's lives and the practical and ideological significance of changes in patterns of labour market involvement on women's leisure and health.

Title: **OLDER WOMEN OF THE AUSTRALIAN LONGITUDINAL STUDY ON WOMEN'S HEALTH**

Authors: Julie Byles

Name of Conference: The Australian Association of Gerontology 1998 National Conference, 15-17 October 1998

The Australian Longitudinal Study on Women's Health (Women's Health Australia) was established to explore biological, psychological, social and environmental factors affecting the health of women in Australia. The study involves three cohorts of women aged 18-23 years, 45-5- years, and 70-75 years at the start of the study in 1996. The older cohort involves 12,624 women from all over Australia. These women provide a picture of ageing that challenges negative stereotypes and declining well-being. Despite common symptoms, such as stiff or painful joints (80%), back pain (73%), eyesight problems (68%), over one-third of the older women rated their health as excellent or very good and only 4% rated their health as poor. Similarly, while women in the older cohort had lower scores on the physical health-related quality of life sub-scales of the Short Form - 36 when compared to women in the other cohorts, mental health sub-scale scores were generally higher ($p<0.001$).

One aim of the study is to observe changes in these women's self-rated health, morbidity, quality of life, and health care use, and to identify factors associated with maintenance of healthy ageing. Here we present a profile of women taking part in the study and highlight key issues to be explored as longitudinal data accumulate.

Title: **FALLS AND SERIOUS INJURY AMONG OLDER AUSTRALIAN WOMEN**

Authors: Julie Byles, Lynette MacKenzie & Gita Mishra

Name of Conference: The Australian Association of Gerontology 1998 National Conference, 15-17 October 1998

Falls are a major cause of injury and hospitalisation among older Australians. This paper describes the 12 month period prevalence of falls among a national cohort of 12,486 women aged 70-75 years. Six hundred and eighteen of these women (4.95%) reported a fall which caused serious injury within 12 months prior to survey. For women reporting such falls, the odds for women who had not fallen. Over 60% of the four hundred and ninety-two women who reported major personal injury also reported they had a serious fall. Falls were also associated with admission to hospital (OR=3.2), and with fracture (OR=9.3). This paper explores medical (co-morbidity and medications), physical (disability, hormone replacement, exercise, BMI, Nutritional risk, alcohol and smoking), and social factors (social support, living arrangements, life events, financial security) associated with falls. Better understanding of these factors is essential to enable falls prevention programs to support health older Australians.

Title: **SOCIAL SUPPORT AND OLDER WOMEN: WHAT IS A HEALTHY LEVEL?**

Authors: Brendan Goodger, Gita Mishra & Julie Byles

Name of Conference: The Australian Association of Gerontology 1998 National Conference, 15-17 October 1998

Background: The 11 item Duke Social Support Index (DSSI) is being used to assess the health impacts of low social support among older people in a number of Australian studies. Using the DSSI and key indicators of health and wellbeing we suggest an optimum level of social support necessary for maintaining and promoting health amongst older people. The DSSI was administered to 12455 women aged 70-75 who completed the baseline survey for the Australian Longitudinal Study on Women's Health.

Results: The DSSI has scores ranging from 11-33 and in this study had mean and median scores of 28.2 and 29.0 respectively. Using the statistical smoothing technique Loess, various levels of social support denoting stratums of risk were calculated. The stratums of risk were developed by reference to standard measures of health covering areas such as health status, quality of life, service use and nutrition.

Conclusions: These results strongly suggest that an optimum level of social support can be defined and that this factor has clear benefits for older woman's health related quality of life, health care utilization, health and nutritional status. The development of an optimum level of social support provides opportunities for the development of a range of health promotion activities to those who maybe at risk of low social support. Such strategies are becoming more important as the consequences of population ageing become more apparent.

Title: **FACTORS ASSOCIATED WITH LOW SOCIAL SUPPORT AND EFFECTS ON THE HEALTH OF OLDER AUSTRALIAN WOMEN**

Authors: Brendan Goodger, Gita Mishra & Julie Byles

Name of Conference: The Australian Association of Gerontology 1998 National Conference, 15-17 October 1998

Background**:** Overseas research indicates that social support can have major importance to the health of older women. In Australia little is known about the factors of association between social support and older woman. Knowing these factors may suggest avenues for health promotion targeted specifically at those older women who are likely to suffer low social support. The 11 item Duke Social Support Index (DSSI) which is being validated for use in Australia with older woman was administered to 12455 women aged 70-74 who completed the baseline survey for the Australian Longitudinal Study on Women's Health.

Results: Using multiple regression models we found that hypothesized factors accounted for 34% of the variance in social support as measured by the DSSI. These factors which we all highly significant (p value <0.005) included, medication use, health related quality

of life, nutritional risk, life events, life satisfaction, health care utilization, risk of elder abuse, satisfaction with general practitioner services and other social factors (marital status and nationality). Lower levels of social support were clearly associated with a number of harmful and deleterious health outcomes.

Conclusions**:** These results provide further support for the construct validation of the DSSI and confirm previous research conducted overseas. These findings will be of use to both health care planners involved in service delivery and health care professionals in their clinical practice. A further sub-study to explore these findings using a longitudinal design is being conducted as part of the Australian Longitudinal Study on Women's Health.

3.3 PUBLICATIONS

3.3.1 Papers published

Title: **VALIDITY OF THE SF-12 COMPARED WITH THE SF-36 HEALTH SURVEY IN PILOT STUDIES OF THE AUSTRALIAN LONGITUDINAL STUDY ON WOMEN'S HEALTH**

Authors: Schofield MJ & Mishra G

Abstract:

Objectives: Brief quality of life scales such as the Medical Outcomes Study Short-Form General Health Survey (SF-36 and SF-12) are in growing demand. This study formed part of the pilot studies for the Australian Longitudinal Study on Women's Health (ALSWH) and aimed to assess the relative merits of using the SF-36 versus the SF-12 for the ALSWH. It also compared norms for the SF-12 derived from the independently administered SF-12 versus the SF-12 embedded in the SF-36. The relative validity of the SF-12 and SF-36 scores was estimated for groups differing in self-reported physical and mental health status.

Method: Two samples of women resident in the Illawarra and Central West districts of New South Wales, Australia were randomly selected from the Health Insurance Commission database (N=3000 in Study 1, N=600 in Study 2). The sample was stratified into young (18-22 years), mid age (45-49) and older women (70-74), and into women living in urban (40%), rural (30%) and remote (30%) areas. In Study 3, 500 households were selected by random digit dial from the telephone white pages and 89 eligible women were identified. Consenting women in all three studies completed a mailout survey.

Results: SF-36 scale scores for the ALSWH pilot studies were similar to US norms, with physical health declining with age, and mental health improving with age. For the older age group only, differences were observed in the health profiles derived from the SF-12 independently administered and SF-12 embedded in the SF-36. For the SF-36 and independently administered SF-12, there were differences in health profile means in all three age groups. Relative validity tests for physical health showed that the SF-12 physical health scores discriminated between women with poor versus good physical health (more versus fewer symptoms in the past 12 months). Mental health relative validity tests showed

the SF-12 mental health scores discriminated well between groups who scored as psychologically distressed on the GHQ-12 and those who did not.

Conclusions: The SF-36, relative to the SF-12, appears to be a more reliable measure for examining changes in health status over time and changes in health status between groups. It has been selected as the main quality of life measure in the baseline survey of the ALSWH.

Published: *Journal of Health Psychology*, 1998; 3(2): 259-271.

Title: **WHAT IS A HEALTHY WEIGHT RANGE FOR MIDDLE AGED WOMEN?**

Authors: Brown WJ, Dobson AJ & Mishra G

Abstract:

Objective: To explore associations between body mass index (BMI) and selected indicators of health and well-being and to suggest a healthy weight range (based on BMI) for middle aged Australian women.

Design: Population based longitudinal study (cross-sectional baseline data).

Subjects: 13,431 women aged 45-49 who participated in the baseline survey for the Australian Longitudinal Study on Women's Health.

Results: Forty eight percent of women had a BMI>25 kg/m^2. Prevalence of medical problems (eg hypertension, diabetes), surgical procedures (cholecystectomy, hysterectomy) and symptoms (eg back pain) increased monotonically with BMI, while indicators of health care use (eg visits to doctors) showed a 'J' shaped relationship with BMI. Scores for several sub-scales of the MOS short form health survey (SF36) (eg general health, role emotional, social function, mental health and vitality) were optimal when BMI was around 19-24 kg/m^2. After adjustment for area of residence, education, smoking, exercise and menopausal status, low BMI was associated with fewer physical health problems than mid-level or higher BMI, and the nationally recommended BMI range of 20 – 25 was associated with optimum mental health, lower prevalence of tiredness and lowest use of health services.

Conclusions: Acknowledging the limitations of the cross-sectional nature of these data, the results firmly support the benefits of leanness in terms of reducing the risk of cardiovascular disease, diabetes and gall bladder disease. The findings are moderated however by the observation that both low and high BMI are associated with decreased vitality and poorer mental health. The optimal range for BMI appears to be about 19 - 24 kg/m^2. From a public health perspective this study provides strong support for the recommended BMI range of 20 - 25 as an appropriate target for the promotion of healthy weight for middle aged Australian women.

Published: *International Journal of Obesity*, 1998; 22: 520-528.

3.3.2 Papers accepted

Title: **SCREENING FOR CERVICAL CANCER: HEALTH CARE, ISOLATION AND SOCIAL SUPPORT**

Authors: Harris MA, Byles JE, Mishra G & Brown WJ

Abstract:

Issue addressed: This research explores associations between participation in cervical cancer screening and health care use, geographical isolation and social support in middle-aged women.

Method: Women aged 45-50 years, randomly selected from the Australian Health Insurance Commission Medicare data base, were surveyed by mailed questionnaire. These women were participants in the Australian Longitudinal Study on Women's Health (Women's Health Australia project).

Results: 81.4% (n=8791) of women were screened. Women with lower education and occupational status, non English speaking women and indigenous women were least likely to be screened ($p<0.001$). Rural women were more likely to be overdue for screening. There were significant associations between screening and the number of visits to the general practitioner, convenience of location of the general practitioner, preference for a female provider and use of oral contraceptives or hormone replacement therapy ($p<0.001$). Post menopausal women were less likely to be screened ($p<0.001$). Social support was a highly significant factor related to screening ($p<0.001$).

Conclusions*:* The promotion of stronger social networks may enhance participation in cervical cancer screening. Further exploration of the importance of social support as a facilitator of screening is warranted.

So what: Greater insight into the role of social support in cervical screening may open new avenues for promoting cervical screening among all women.

Accepted: *Health Promotion Journal of Australia, 1998.*

Title: **STARVING FOR ATTENTION: NUTRITIONAL RISK ASSESSMENT FOR OLDER WOMEN**

Authors: Roberts DCK, Brown WJ, Byles JE & Alexander J

Abstract:

This study explored factors associated with older women's nutritional risk as assessed by the Australian Nutritional Screening Initiative's screening checklist (ANSI). The checklist was completed by 12,249 women aged 70-74 years as part of the Australian Longitudinal Study on Women's Health. Women also provided information on a range of health outcomes, health care utilisation, and demographic variables. Less than half (48%) the women had ANSI scores indicating 'good' nutritional risk status; 18% were at high

risk and 12% were in the very high risk category. These data suggest that a proportion of women in this age group could benefit from more detailed analysis of their nutritional status. ANSI scores were associated with SF-36 Quality of Life scores, the number of visits to a general practitioner in the last year, frequent tiredness and ability to manage on available income, independent of other demographic variables. There was also a close association between ANSI risk category and responses to other 'disease' questions. Stroke, diabetes, heart disease, asthma and bronchitis were all associated with higher scores, as were indicators of increased usage of health care (hospital stays, visits to general and specialist medical practitioners). These results indicate a need for greater attention to nutritional risk factors among older women, and for development of strategies for prevention of poor nutrition and it's associated morbidity and mortality.

Accepted: *Public Health Nutrition*, 1997.

Title: **IS LIFE A PARTY FOR YOUNG WOMEN?**

Authors: Brown WJ, Ball K & Powers J

Abstract:

Baseline data for the Australian Longitudinal Study on Women's Health (now known as the Women's Health Australia or WHA project) were collected from women in three age groups (18 - 23; 45 - 50; 70 - 75) in 1996. The project aims to explore how changes in biological, psychological, social and lifestyle factors impact over time on women's physical and emotional health. Participants in the study were randomly selected from the HIC/Medicare data base, and represent women from all walks of life, from every State and Territory of Australia.

This paper focuses on lifestyle variables, as well as causes of, and methods of coping with stress, in the young cohort (N=14600). The most common causes of stress in this group were money, study and work/employment issues, and the most common method of coping was talking to a good friend. Almost 20% of the cohort reported eating (more or less) as a method of coping with stress, and 17% reported using exercise as a stress reduction strategy. One third of the cohort were current smokers and almost one fifth reported binge drinking (more than five drinks) at least weekly.
More than 60% of the sample reported more than one health 'risk' characteristic and multiple risks were associated with decreased physical and mental health scores on the SF-36. Mental health scores were very low for women who reported unhealthy eating practices and high levels of stress, and for women who reported three or more risk characteristics (33% of the cohort).
The data provide insight into levels of stress and strategies for coping with stress in young women. Associations between high stress levels, poorer mental health and multiple risk behaviours suggest that life is not a party for many young women in the transition between adolescence and adulthood. The findings, which will be the focus of future work in this longitudinal study, have implications for health education and health promotion programs for young women.

Accepted: *ACHPER Healthy Lifestyles Journal, 1998.*

Title: **THE WOMEN'S HEALTH AUSTRALIA PROJECT AND POLICY DEVELOPMENT**

Authors: Bryson L

Abstract:

The Women's Health Australia (WHA) project plans to follow for 20 years, the health of a national sample of around 42 000 women who, in 1996 were in the age cohorts, 18-22, 45-49 and 70-74. The multi-disciplinary research team adopts a social approach to health, focuses on biological, psychological, social and lifestyle factors and their relationship to physical health and emotional well-being, and is examining the use of, and satisfaction with, health care services.

Base-line survey data highlight diversity and the need for health policy to tailor communications to the different age groups. In terms of general well-being and service appropriateness, the young are the most problematic, the mid cohort next while older women indicate fewest problems. Young women experience the highest levels of stress, often suffer from tiredness and are over-concerned with their weight and shape. They are also most dissatisfied with GP services. Issues of employment and health are also central. In general employment is associated with good health, but strains are evident when there are family commitments. As employment becomes increasingly normalised for women, health policy must be mindful of these effects and the significant difficulties faced by a small group of women whose health precludes employment.

Accepted: *Australian Journal of Primary Health - Interchange, 1998.*

3.3.3 Papers submitted

Title: **EMPLOYMENT AND WOMEN'S HEALTH**

Authors: Bryson L & Warner-Smith P.

Abstract:

In this paper we focus on the links between employment and women's health, with a view to contributing to broader debates relating to women, work and social policy. Our empirical data are from the survey responses of a cohort of women in the longitudinal Women's Health Australia (WHA) project. These women were aged between 45 and 50 years at the time of collection of the baseline data in 1996. Here we examine links between the hours the women are employed, their family commitments and their health, and we point to a strong association between better health and employment for women. Given a number of current trends, the policy implications of our findings are of particular importance for contemplating the future demographic characteristics of Australian society, over and above their fundamental relevance for women's citizenship.

Submitted: *Just Policy*, 1998.

Title: **TYRANNY OF DISTANCE? THE HEALTH OF MID-AGE WOMEN LIVING IN FIVE GEOGRAPHIC AREAS OF AUSTRALIA.**

Authors: Brown W, Young A and Byles J

Abstract:

Over 14,000 women aged 45-50 are participating in the Australian Longitudinal Study on Women's Health, which is designed to track the health of Australian women for 20 years, and to understand lifestyle and health care factors that influence women's health. The study deliberately over-represents women from rural and remote areas. This analysis of baseline data from the study compares the responses of women living in urban areas (capital city, other metropolitan), large rural centres, small rural centres, other rural areas and remote areas (remote centres, other remote areas) of Australia. The data show that while rural and remote women in this age group have similar levels of self-rated health, they have significantly fewer visits to general practitioners and specialists ($p<0.001$) and more visits to alternative health care providers. Rural and remote women were also more likely to undergo gynaecological surgery than women living in urban areas ($p<0.001$). Other results suggest that overweight is more common among rural and remote area women. Rural and remote women also report lower levels of stress than women from urban areas ($p<0.001$). Further follow-up will allow any divergence in health and health care equity to be explored as these women move into their older years.

Submitted: *Australian Journal of Rural Health, 1998.*

3.4 COMMUNICATION WITH PARTICIPANTS

The 1998 newsletter has been prepared and tenders are currently being called for printing and mailing to study participants. A final draft is shown in Appendix 2.

3.5 OTHER RESEARCH ACTIVITIES

During the last few months, the researchers have conducted focus groups with study participants to explore issues relating to:

1) physical activity among older people; and
2) weight gain at menopause.

The physical activity groups were conducted in the Hunter and Manning areas of NSW. A report "Never Too Late" was produced for NSW Health (who commissioned the study). A copy has been made available to the DHFS. The weight gain focus groups were conducted in the Lismore and Central Coast areas of NSW. This work is part of Lauren William's PhD research.

The 'foundation' PhD students are all now in the data analysis stage of their projects. The research team is trying to find sources of funding to support another group of students during the next triennium.

3.6 EXTENSION OF CONTRACT FOR UNIVERSITY OF QUEENSLAND RESEARCHERS

An extension to the contract between the University of Newcastle and the University of Queensland has been developed with the research team at the University of Queensland to cover the period July-December 1998, during which a new contract for the conduct of the entire study will be negotiated.

A copy of this extension is appended to this report (see Appendix 3). Activities of the University of Queensland research team during the last three months are summarised in Part B of this report.

PART B: UNIVERSITY OF QUEENSLAND

ACTIVITIES OF UQ SPECIAL COHORTS JULY TO SEPTEMBER 1998

1. SUMMARY

Work with the indigenous cohorts in Cherbourg and Woorabinda has involved the facilitation of community-based initiatives and programs that have developed from reporting the results of the baseline survey to the communities. Data collection for the baseline survey in Hopevale was initiated. Feedback for the Filipina cohort took place in six different locations in Queensland and follow-up for the Filipina youth cohort was undertaken in Cairns and has commenced in Brisbane. The analysis of the data of the Former Yugoslavia cohort was completed and the write-up is now under way.

2. THE INDIGENOUS COHORTS

The Cherbourg Healthy Lifestyle Program (a joint community and ALWSH initiative which was developed from the results of the baseline survey) was launched from the 21st to the 23rd September at Cherbourg. Setting up for the launch included several planning meetings in Cherbourg (3 hours North West of Brisbane) with the Cherbourg Health Action Group and UQ Human Movements staff and students. This included recruitment of a qualified fitness instructor from a neighbouring town, the planning and purchase of appropriate gym equipment, securing an appropriate location within Cherbourg, and designing program t-shirts for the women. Twenty-two women volunteered for the program fitness screening (the target was to screen twenty women) and were tested over the three days. The program has been set up so that it can run on Tuesdays and Thursdays each week with the qualified fitness instructor writing and running programs for the women.

Gail Williams and Sam Thompson travelled to Woorabinda (6 hours North West of Brisbane) to consult the community about the report from the baseline survey. Reanalysis of the baseline data to look at the differences between generations of women has begun at the community's request. Key members of the community have identified the need to explore the differences between women of different ages, because conflict between generations has been identified as an issue for women in the community.

An Indigenous researcher is urgently needed for consultation with the other Indigenous communities that are part of the cohort. It is impossible to recruit someone on a short term (ie.3 month) contract. Until we have a contract for a continuing period we cannot get these other cohorts in Brisbane, Toowoomba and Rockhampton up and running. So until then, these indigenous cohorts are on hold.

3. THE FILIPINA COHORT

The feedback process for the Filipina Cohort commenced in July 1998, with results of the baseline, follow-up and baseline youth questionnaires being presented in 6 locations throughout Queensland. Nicole Stirling, Anne-Marie Benedicto (an intern from Columbia University for 10 weeks with ALSWH) and Lenore Manderson travelled to Northern Queensland and held two meetings in Mt Isa, one in Cairns and in Mareeba and two meetings in Townsville. Feedback results were presented to the Filipina Cohort in the Sunshine Coast on the 5th of September. The meetings consisted of reporting of results, holding discussions about the results with the women and providing detailed statistical reports to each multicultural health worker. Feedback results will be presented to the Filipina Cohort in Brisbane in October.

Follow-up for the youth Filipina Cohort commenced in July and was undertaken in Cairns during this month. Follow-up for this cohort commenced in Brisbane in September and is ongoing.

4. PAPERS AND PRESENTATIONS

On 7 August, Nicole Stirling, Samantha Thompson, Archana Reddy and Anne-Marie Benedicto, participated in the Women's Health Seminar, titled, 'What's happening in Women's Health at ACITHN", at the Westpac Auditorium, QIMR. Samantha and Archana presented on the progress of the indigenous cohorts. Nicole spoke on the feedback processes and reporting in Far North Queensland and Anne-Marie spoke on young Filipina women's health. A special symposium on community participation in public health research is being planned for the 9th October to coincide with Professor Len Syme's visit to the ACITHN Program. This symposium will include presentations on community participation at Cherbourg and Woorabinda and work with the Filipina cohort. Members of the Filipina and indigenous communities have been invited to be present.

4.1 Publications

Woelz-Stirling N, Manderson L, Kelaher M & Gordon S. Revised and resubmitted. Marital conflict and finances among Filipinas in Australia. *International Journal of Intercultural Relations.*

Manderson L, Kelaher M & Markovic M. 1999. Bodies transported: Health and identity among involuntary immigrant women from Bosnia and Herzegovina. In Whiteford, L.M. and MANDERSON, L. (eds.), *Globalization, Health and Identity: The fallacy of a level-playing field*. Boulder, CO: Lynne Rienner Publishers.

4.2 Publications in process

Manderson L, Kelaher M, Williams G & Woelz-Stirling N. Developing qualitative databases for multiple users. *Qualitative Health Research.*

Woelz-Stirling N, Manderson L & Kelaher M. Sex, contraception and reproduction among young Filipinas in Australia. *Reproductive Health Matters.*

Woelz-Stirling N, Kelaher M & Manderson L. Young women in conflict: Filipinas growing up in Australia. *Journal of Social and Personal Relationships.*

Thompson, S., Reddy, A., Williams, G. Health and fitness program at Cherbourg. *ATSI Health Journal.*

Williams, G., Thompson, S. Studying households and communities: Epistemological and epidemiological issues in working with Indigenous Australians. *ANZ J Public Health.*