

To Have or Not To Have?

Australian Women's Childbearing Desires, Outcomes and Expectations

Sara Holton

**Submitted in fulfilment of the requirements of the degree of
Doctor of Philosophy**

May 2010

**Centre for Women's Health, Gender and Society
School of Population Health
Faculty of Medicine, Dentistry, and Health Sciences
The University of Melbourne**

ABSTRACT

Although Australia's fertility rate has recently increased it has been below replacement level since the mid 1970s. There are widespread perceptions that Australia's fertility rate is too low mainly due to concerns regarding the social and economic implications of low fertility for Australia's future prosperity. Yet the factors which contribute to Australian women's childbearing outcomes are not fully understood, and it is not well known whether the low fertility rate is a deliberate or unintended consequence of women's childbearing behaviour.

There have been several investigations into the factors which are salient in Australian women's childbearing outcomes. A limited number of individual explanatory factors have been identified including women's level of education, labour force participation, marital status and age. Existing theoretical explanations of fertility decision-making tend to view childbearing as a rational, voluntary process and focus on the 'costs' to women of having children. Although this may help explain why women do not have children, it contributes very little to understanding why women do have children.

The aims of this study were: to explore the relative importance of a range of psychosocial factors (including attitudes toward women and motherhood, the influence of women's partners' fertility preferences and behaviours, women's education debts, and housing conditions) and women's health status to women's childbearing outcomes; to determine any differences in the contributory factors and their relative importance by parity; and to identify women's childbearing desires and expectations.

The study used a cross-sectional survey design in a population based sample of Australian women currently of childbearing age. The sample was drawn from women aged 30-34 years living in Victoria, one Australian state, in 2005 randomly selected from the Australian Electoral Roll by the Australian Electoral Commission. Participation involved the completion of a study specific anonymous self administered postal questionnaire. The questionnaire assessed participants' sociodemographic

characteristics; attitudes toward women and motherhood; previous childbearing experiences, current and future childbearing desires, and future childbearing expectations; the importance of a variety of psychosocial and health factors in childbearing outcomes; and past and present health status.

569 women (47%) completed and returned questionnaires, which is high for an unsolicited postal survey. The participants were broadly representative of women of the same age in the general population. Most participants wanted children and were mothers, and voluntary childlessness was very uncommon.

Multiple, complex and interrelated biological, psychological and social factors such as adverse health conditions, attitudes toward women and motherhood, an interest in being a mother, lack of a partner, education debts and housing affordability were associated with women's childbearing outcomes. The factors and their relative importance varied by parity. Many of the reasons participants identified as salient to their childbearing outcomes were actually obstacles or constraints which prevented them from achieving their childbearing desires.

The results indicate that women often have fewer children than they actually desire and many would have (more) children if their circumstances were different. It appears that it is not the 'costs' of children that are important in women's childbearing outcomes but the necessity for women's circumstances to be optimal before they will consider having (more) children. An innovative conceptual framework highlighting the importance of women's circumstances in their childbearing behaviour was developed as a result of the findings.

The results challenge prevailing views that women's childbearing outcomes are mostly voluntary, and based mainly on financial or career considerations. The findings have implications for theoretical explanations of fertility decision-making, and policies which aim to address the fertility rate and women's childbearing behaviour suggesting that such policies need to address the barriers women face in family formation.

DECLARATION

This is to certify that:

- i) the thesis comprises only my original work,
- ii) due acknowledgement has been made in the text to all other material used, and
- iii) the thesis does not exceed 100,000 words in length, exclusive of footnotes, tables, figures, references and appendices.

Sara Holton

PREFACE

The following publications have arisen from this research project.

Holton, S., Fisher, J. & Rowe, H. (2009) Attitudes toward women and motherhood - their role in Australian women's childbearing behaviour. *Sex Roles*, 61(9): 677-687.

Holton, S., Fisher, J. & Rowe, H. (in press) Motherhood: is it good for women's mental health? *Journal of Reproductive & Infant Psychology* (accepted September 2009).

ACKNOWLEDGEMENTS

Many people have contributed, supported and encouraged me with this PhD project.

First, I acknowledge with gratitude the women who freely gave their time to participate in this research project, and shared their personal experiences. Without their participation the research project would not have been possible.

I wish to thank my supervisors, Associate Professor Jane Fisher and Dr Heather Rowe, for their advice, guidance, support and sharing of knowledge throughout the process of writing this thesis.

I am grateful to Associate Professor Ian Gordon from the University of Melbourne's Statistical Consulting Centre who provided guidance and assistance regarding the sample size determination and statistical analyses.

I am thankful to the Victorian Health Promotion Foundation (VicHealth) who generously awarded me a Public Health PhD Research Scholarship (project number 2004-0694). I also received a small grant for this research project from the Population Health Investing in Research Students' Training Scheme run by the School of Population Health at the University of Melbourne. These awards greatly assisted with the costs involved in undertaking the project.

I am also grateful to my fellow students, in particular Catherine Acton, Mandi Cooklin, Karin Hammarberg, Heather McKay and Natasha Maharaj at the Centre for Women's Health, Gender and Society (formerly the Key Centre for Women's Health in Society) at the University of Melbourne for sharing with me the highs and lows of life as a PhD student.

Most of all I would like to thank my husband, John Barnett, for his support and encouragement, and our daughter Maya who is my unexpected but very gorgeous response to the question 'to have or not to have?'. John, Maya and our dog Lucy have provided a happy distraction from PhD studies.

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LIST OF ABBREVIATIONS

ABS	Australian Bureau of Statistics
AEC	Australian Electoral Commission
AFFD	Australian Family Formation Decisions Project
AIFS	Australian Institute of Family Studies
ART	Assisted Reproductive Technology
ASCO	Australian Standard Classification of Occupations (Australian Bureau of Statistics 1997a)
ASCRG	Australian Standard Classification of Religious Groups (Australian Bureau of Statistics 1996a)
ASGC	Australian Standard Geographical Classification (Australian Bureau of Statistics 2004a)
ATSI	Aboriginal or Torres Strait Islander
AUD	Australian Dollar
DI	Donor Insemination
GP	General Practitioner
HECS	Higher Education Contribution Scheme
HELP	Higher Education Loan Program
HILDA	Household, Income and Labour Dynamics in Australia Survey
ICD-10	International Classification of Diseases (Australian Bureau of Statistics 2003d)
IPP	Information Privacy Principle

IRSAD	Index of Relative Socio-Economic Advantage/Disadvantage (Australian Bureau of Statistics 2003h)
ISSP	International Social Survey Programme
IUD	Intra-Uterine Device
IVF	In Vitro Fertilisation
MANOVA	Multivariate Analysis of Variance
MCS	Mental Component Summary (SF-12v2)
MS	Multiple Sclerosis
NLSY79	1979 National Longitudinal Survey of Youth
OCP	Oral Contraceptive Pill
PCA	Principal Components Analysis
PCS	Physical Component Summary (SF-12v2)
PNG	Papua New Guinea
PWI	Personal Wellbeing Index (International Wellbeing Group 2005)
SF-12v2	Short Form Health Survey Version 2 (Medical Outcomes Trust 2002)
SEIFA	Socio-Economic Indexes for Areas (Australian Bureau of Statistics 2003h)
SPSS	Statistical Package for Social Sciences
SWLS	Satisfaction With Life Scale (Diener et al. 1985)
TFR	Total Fertility Rate
UN	United Nations
VOC	Value of Children

CHAPTER 1

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1 CHILDBEARING IN AUSTRALIA

The fertility of a country's population is an important determinant of its demographic future (Lattimore and Pobke 2008: iii). Until recently Australia had experienced a period of fertility decline. Despite the recent increase, there are widespread perceptions that the number of births is too low mainly due to concerns regarding the social and economic implications of low fertility for Australia's future prosperity. Births form an important component of population growth, which is a key source of economic growth.

Low fertility in Australia is commonly attributed to deliberate decisions by women to avoid having children, and it is frequently assumed that women are able to choose when or whether they have a child. Yet the factors which contribute to Australian women's childbearing outcomes are not fully understood, and it is not well known whether Australia's low fertility is a deliberate or unintended consequence of women's childbearing behaviour.

1.1 CHILDBEARING PATTERNS IN AUSTRALIA

Australia is a prosperous, developed country comprised of a land area of almost 7.7 million square kilometres, an area almost as great as that of the United States of America (USA). Australia is a liberal democracy with a federal system of government comprising a national government, and the governments of the six states and two territories. Before European settlement commenced in the late 18th Century, Australia was inhabited by indigenous Australians. Most of Australia's population currently lives on the south-east, east or south-west coasts, and around two-thirds live in a state or territory capital city. In 2006 Australia's resident population was estimated to be just over 20.7 million with almost a quarter of the population born overseas (Australian Bureau of Statistics 2008a).

1.1.1 Australia's fertility rate

The total fertility rate (TFR) in any given year is the sum of age specific fertility rates defined as live births at each age of mother per female population at that age. It represents the number of children a woman would bear during her lifetime if she experienced current age specific fertility rates at each age of her reproductive life (Australian Bureau of Statistics 2008c: 49). Australia's TFR has varied substantially over the past century. Australia had a 'baby boom' when the fertility rate increased after the Second World War, a 'baby bust' from the mid 1970s to the 1990s when the fertility rate declined, and since 2001 there appears to be an upward trend in fertility rates: a 'baby bounce' (Paice 2003, Lattimore and Pobke 2008).

Australia's fertility rate fell from about six babies per woman in the mid nineteenth century to 3.9 in 1901. There was a decrease in the fertility rate during the Great Depression of the 1930s when it declined to 2.1 babies per woman in 1934. The Depression was a period when economic constraints led to both postponement of marriage and avoidance of childbearing within marriage resulting in many women never having children (Australian Bureau of Statistics 2002c).

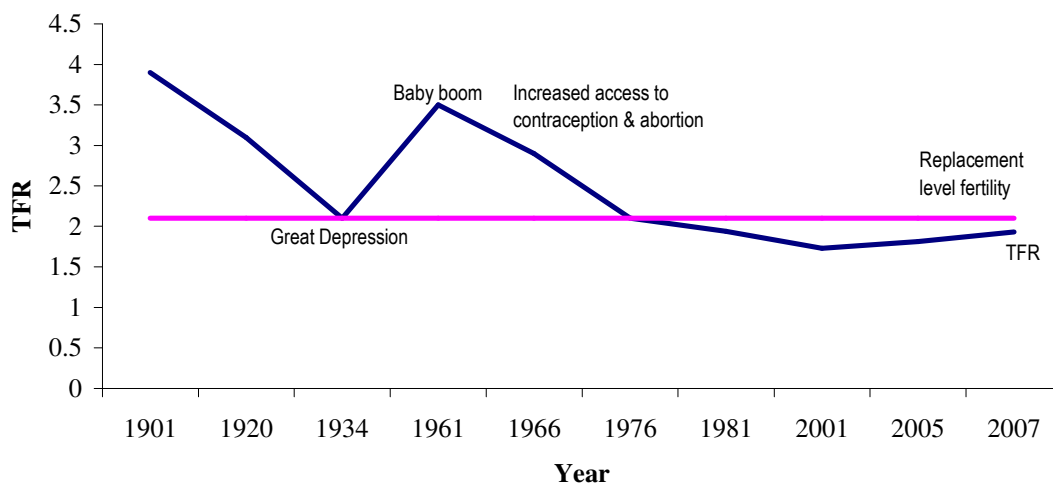
The fertility rate then peaked following the end of the Second World War increasing to 3.5 babies per woman in 1961 at the height of the 'baby boom'. The 'baby boom' coincided with an improved economic outlook which resulted in both earlier marriage and higher marriage rates, births postponed during the War taking place, and an influx of immigrants of childbearing age (Australian Bureau of Statistics 2002c, Gray et al. 2008: 2).

The development and availability of modern fertility control measures, and women's increased participation in higher education and the paid workforce had a profound effect on the fertility rate during the 1970s which declined to 2.1 in 1976 (Australian Bureau of Statistics 1996b). In 1961, the oral contraceptive pill (OCP) became available in Australia for distribution by prescription from medical practitioners who approved of its use. As a result, access to the OCP was dependent on the medical practitioner's beliefs regarding its use which was often a barrier for unmarried women. In 1972, the OCP was placed on the Pharmaceutical Benefits List, an

Australian Government program that provides subsidised prescription drugs to Australian residents, which decreased its cost and thereby increased its use and acceptance (Weston and Parker 2002: 6). New versions of the intra-uterine device (IUD), developments in sterilisation procedures, and easier access to safe and legalised abortion also contributed to the decline in the fertility rate (Carmichael 1998, Weston and Parker 2002: 7).

During the 1980s the fertility rate stabilised, fluctuating between 1.8 and 1.9, and then declined again in the 1990s (Department of the Prime Minister and Cabinet 2008, Gray et al. 2008: 2). At 1.73 babies per woman, the fertility rate recorded for 2001 was the lowest on record. Since 2001 the total fertility rate has trended upwards reaching 1.81 in 2005. Births in Australia reached a post Second World War historical high in 2007 with a total fertility rate of 1.93 babies per woman, the highest since 1981 (Australian Bureau of Statistics 2002d, Australian Bureau of Statistics 2007i, Australian Bureau of Statistics 2007d, Australian Bureau of Statistics 2008a, Australian Bureau of Statistics 2008c).

Trends in the total fertility rate in Australia over the last one hundred years are illustrated in Figure 1.1.



Source: Australian Bureau of Statistics (2002d, 2007i, 2007d, 2008a, 2008c)

Figure 1.1 Trends in the Total Fertility Rate (Australia)

Although the total fertility rate has increased and appears to have stabilised over the last decade, Australia's fertility rate has been below replacement level since 1976. Replacement level fertility is the number of babies a woman would need to have over her reproductive life span to replace herself and her partner. Replacement fertility is estimated at around 2.1 babies per woman (Australian Bureau of Statistics 2008c: 48).

Total fertility rates for Australia's states and territories have followed similar trends to that of the whole Australian nation (Australian Bureau of Statistics 2008c: 16). Although slightly lower than the TFR for Australia, the TFR for Victoria (the state in which this study was conducted) has recently been trending upwards following a period of decline. In 2007, Victoria had a TFR of 1.87 babies per woman which is the highest it has been since 1978 (Australian Bureau of Statistics 2008c: 6).

Australia's TFR is below the world's average of 2.6 babies per woman (Australian Bureau of Statistics 2008c: 22). However, fertility rates for individual countries vary considerably due to differences in social and economic development. In general, developing countries have higher fertility rates while developed countries typically have low fertility rates (that is, below replacement level) (Australian Bureau of Statistics 2008c: 23, Department of the Prime Minister and Cabinet 2008: 23, Gray et al. 2008: ix). Australia's fertility rate is following a similar trend to that of other developed countries but in comparison is among the middle ranked nations (Australian Bureau of Statistics 2006b: 18, Australian Bureau of Statistics 2008c: 22, Department of the Prime Minister and Cabinet 2008: 2). For example, projected fertility rates for the United States of America and New Zealand (2.1 and 2.0 respectively) are higher and the rate for Canada is lower (1.5) (Australian Bureau of Statistics 2008c: 23).

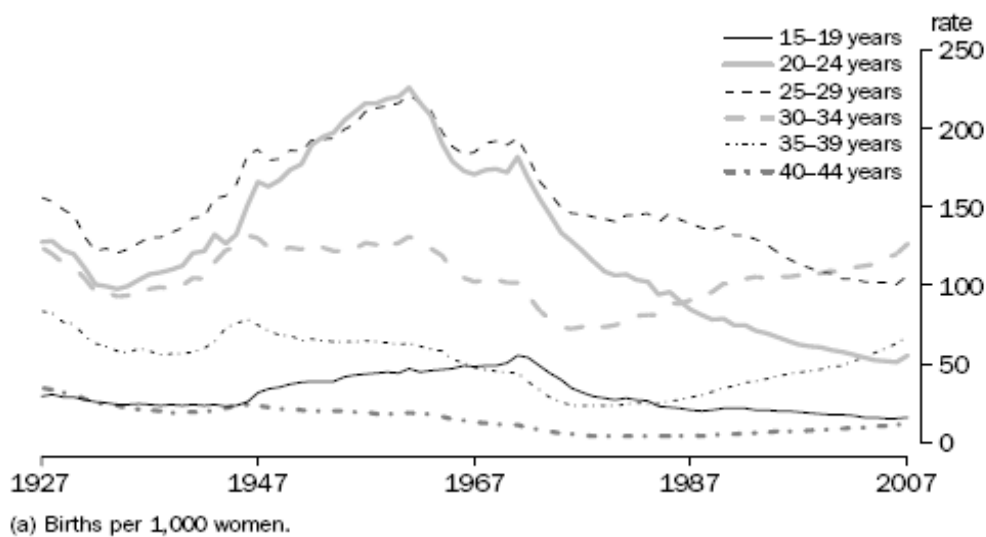
1.1.2 Trends in childbearing

1.1.2.1 Delayed childbearing and older mothers

Women's fertility and fecundity decreases progressively with increasing age. On average, women aged 35 will take twice as long to conceive as women aged 25 and after the age of 45 the chance of conceiving spontaneously is almost negligible (Wood et al. 1992: 482, Gosden and Rutherford 1995, Lansac 1995: 1033). Pregnancy at later ages carries more risk for the mother and baby including increased rates of miscarriage, stillbirth, ectopic pregnancy, preeclampsia, gestational diabetes and foetal abnormalities (Gosden and Rutherford 1995, Lansac 1995, Jolly et al. 2000, Tough et al. 2002, Bewley et al. 2005).

Although women giving birth in their twenties have the lowest incidence of pregnancy complications, women in Australia are now more likely to give birth in their thirties or forties than in their twenties (Kippen 2006: 1, Australian Bureau of Statistics 2007i, Department of the Prime Minister and Cabinet 2008: 27). Fertility rates amongst younger women in Australia have recently declined while fertility rates for older age groups have increased. In 1971 the median age of women giving birth was 25.4 years, and since then it has increased steadily. In 2007 the median age of all women who gave birth was 30.7 years (Australian Bureau of Statistics 2008c: 17). Furthermore women aged 30-34 years have had the highest fertility of all age groups since 2000 (Australian Bureau of Statistics 2008c: 9).

Trends in age specific fertility rates in Australia over the last eighty years are illustrated in Figure 1.2.



Source: Australian Bureau of Statistics (2008c: 10)

Figure 1.2 Age specific fertility rates (Australia, 1927 - 2007)

The age at which women first give birth has also increased to a median age of 28.0 years in 2006 (Laws and Hilder 2008: 16). Women over the age of 30 who are giving birth are increasingly likely to be first time mothers. Of all the first births in 2006, 43 percent were to women in this age group compared with 28 percent in 1993 (Department of the Prime Minister and Cabinet 2008: 27, Laws and Hilder 2008: 16).

Of the states and territories, Victoria and the Australian Capital Territory had the oldest mothers in 2007, with median ages of 31.6 years and 31.3 years respectively (Australian Bureau of Statistics 2008c: 18). The median age at first birth in Victoria has risen from 25 years in 1985 to 29 years in 2006 (Davey et al. 2008: 6).

The trend in Australia towards older motherhood has contributed to the overall decline in Australia's fertility rate and below replacement level fertility. Delayed childbearing reduces the remaining length of time in which women can have babies, generally leading to fewer babies per woman and an increased level of childlessness (Australian Bureau of Statistics 2007d, Department of the Prime Minister and Cabinet 2008: 29, Gray et al. 2008: 4).

1.1.2.2 Childlessness

The proportion of women who will never give birth to children appears to be increasing (Weston and Qu 2001b: 10). It is estimated that between 20 and 30 percent of Australian women will not have children (Australian Bureau of Statistics 1999, Merlo and Rowland 2000: 21, Australian Bureau of Statistics 2002c, Paice 2003, Summers 2003b: 612, Department of the Prime Minister and Cabinet 2008: 21), and a similar proportion of women aged 30-34 years are estimated to be childless (G. Carmichael [Australian National University] pers. comm., 2 August 2004). Patterns of childlessness derived from first birth fertility rates for 2000 suggest that 31 percent of women in Victoria will remain childless (Australian Bureau of Statistics 2002c).

1.1.2.3 Advances in science and technology

Advances in science and medical technology have impacted childbearing by making it easier for individuals to control their fertility and providing assistance for those with fertility difficulties.

Fertility control

More reliable methods of contraception such as the oral contraceptive pill (OCP) and newer versions of the intra-uterine device (IUD) were introduced in Australia in the 1960s allowing women to have greater control over their fertility and enhancing their ability to 'choose' whether or not they had children, when they had them and how many they had. Prior to the introduction of contraceptives such as the OCP and IUD, Australian women often had more children than they expected to have due to relatively inefficient means of contraception and consequently, were unable to exercise little 'choice' about becoming mothers (Weston and Parker 2002: 6, de Marneffe 2004: 6).

Liberalisation of Australian abortion laws also commenced in the 1960s increasing a woman's access to safe abortion for an unintended or unwanted pregnancy (Carmichael 1998, Weston and Parker 2002: 7). However, state and territory abortion laws are inconsistent, and often unclear and complex (de Crespigny and Savulescu 2004). Legislation was passed in the Victorian Parliament in 2008 confirming the lawfulness of abortion in Victoria (Victorian Government 2008). However, prior to

this abortion was only permitted in Victoria based on maternal health grounds. Abortion was not ‘unlawful’ if a doctor believed that the abortion was necessary to preserve the woman’s life or her physical or mental health (de Crespigny and Savulescu 2004).

Reliable estimates of Australia’s abortion rates are unavailable as abortion statistics are only routinely collected in the states (South Australia, Northern Territory and Western Australia) with legislation requiring notification of abortions (Chan and Sage 2005). Nevertheless, it is known that many contemporary Australian women have abortions. A survey of a nationally representative sample of 9,134 Australian women aged 16–59 years found that 22.6 percent reported having experienced an induced abortion (Smith et al. 2003a).

Infertility treatment

Infertility is defined as the failure to conceive after one year of regular sexual intercourse without the use of contraceptives (Johnson and Everitt 2000: 265). About 70 percent of couples who try actively to conceive will achieve a pregnancy within six months. However, it is estimated that in industrialised countries such as Australia approximately 10 to 15 percent of couples who wish to have a child experience difficulties conceiving (Johnson and Everitt 2000: 265, Smith et al. 2003a).

Advances in assisted reproductive technologies have impacted upon women’s childbearing, providing options for women who previously would have been unable to have children due to infertility (Langdridge et al. 2000: 321). By the late 1960s fertility clinics were established in all Australian states (Cox 1991). The first Australian birth after in vitro fertilisation (IVF) occurred in 1980. In 2004 an estimated 2.5 percent of all births in Australia were the result of assisted reproductive technology (Australian Bureau of Statistics 2007e).

1.1.2.4 Life course changes

The current trend in delayed childbearing can be attributed to a number of social, educational and economic factors which have resulted in major social and life course changes (Weston and Parker 2002: 7, Department of the Prime Minister and Cabinet 2008: 8, Laws and Hilder 2008: 8). Since the late 1970s there has been an increased

delay in the ages at which young adults reach milestones that have traditionally preceded childbearing (Weston and Parker 2002: 7, Australian Bureau of Statistics 2005, van Balen 2005: 276, Gray et al. 2008: 9). Compared to women who were aged in their twenties in the 1970s, women currently in their twenties are more likely to be participating in higher education and paid employment, marrying or forming partnerships later, and still living in the parental home. The Australian Temperament Project investigated aspirations for relationships, marriage and parenthood among a sample of 1,250 young Australians aged 17-18 years who have been followed since infancy. The Project found that while young people continue to aspire to marry and have children, they are expecting to make these life transitions at a later age than was observed in previous decades (Smart 2002: 35).

Living arrangements

The living arrangements of people currently in their twenties are different from those of the same age group over thirty years ago. In 2001, the most common living arrangement for people in their twenties was to be living in the parental home, thirty percent of people in this age group were living with at least one parent. In contrast, in the 1970s most people (forty percent) in this age group were living as partners in couples with children (Australian Bureau of Statistics 2005). A larger proportion of people aged in their twenties are now also living in group households (typically comprised of unrelated adults) compared to in the 1970s, suggesting a shift towards transitional living arrangements after leaving the parental home but before forming partnerships (Australian Bureau of Statistics 2005).

Partnership formation

A key factor in delayed childbearing is that women are marrying or forming partnerships at later ages than in the past (Australian Bureau of Statistics 2007b, Department of the Prime Minister and Cabinet 2008: 11). In 1986, the median age at first marriage for Australian women was 23.5 years, increasing to 28.0 years in 2005. The median age at first marriage for men has also increased from 26.6 in 1986 to 30.0 in 2005 (Australian Bureau of Statistics 2007b). Marriage rates are also declining and

more women are living in de facto relationships (cohabiting relationships which are not registered marriages) (Australian Bureau of Statistics 2007b).

In 2001 almost half (49 percent) of 29 year olds had never been married compared to 13 percent of 29 year olds in 1976 (Australian Bureau of Statistics 2005). Marriage is associated with childbearing. Married women are more likely to have children and have more children than women who have never married or who are in de facto relationships (Jain and McDonald 1997, Barnes 2001, De Vaus 2002). Although the proportion of children born outside marriage has increased, most couples wait until they marry before having children (Weston and Parker 2002: 7, Australian Bureau of Statistics 2007b, Gray et al. 2008: 25). In 2007, almost two-thirds (67 percent) of all births were to parents in a registered marriage compared to 82 percent in 1987 (Australian Bureau of Statistics 2008c: 6).

Women's participation in higher education and paid employment

Changes in women's participation in higher education and paid employment are also related to delayed childbearing and Australia's low fertility rate (Weston and Parker 2002: 8). In 2001, women in their twenties were more likely to be participating in higher education than women of the same age in 1976 (24 percent compared with 9 percent), and young women are now more likely to progress to tertiary education after leaving secondary school (De Vaus 2002: 18, Australian Bureau of Statistics 2005). In general, there is an inverse relationship between women's educational attainment and their fertility rate (Barnes 2001: 8). Women who have an undergraduate degree or higher level qualification are more likely to delay the first birth and have fewer or no children than women who do not have post secondary school qualifications (Jain and McDonald 1997, McDonald 1998, Australian Bureau of Statistics 2002c, De Vaus 2002).

Women's participation in paid employment has also increased since the 1970s (75 percent in 2001 compared to 57 percent in 1976) (Australian Bureau of Statistics 2005). Women's rising participation in paid employment is one of the key factors associated with fertility decline and low fertility rates (Newman 2008: 1). Fertility rates are lower among women with higher levels of participation in the paid

workforce and who are in professional or related jobs that typically require a bachelor degree or higher qualification (Jain and McDonald 1997, McDonald 2000a, De Vaus 2002, Vanstone 2002).

1.2 IMPLICATIONS OF THE LOW FERTILITY RATE

Despite the recent increase in the TFR, the fertility level remains a prominent concern in Australia's public debate and there are widespread perceptions that Australia's fertility level is too low (Mitchell and Gray 2007: 23, Parr 2007: 207, Gray et al. 2008: ix, Lattimore and Pobke 2008: xvii).

The social and economic implications of low fertility levels are significant (Lattimore and Pobke 2008: xvii). Births form an important component of population growth (Australian Bureau of Statistics 2006b). Population growth has traditionally been a key source of economic growth, and concern has been widely expressed that without steady population growth, economic growth will stall (De Vaus 2002: 14).

A central consequence of fertility decline (and increased life expectancy) is an ageing population, in which the proportion of older people in the population increases while the proportion of younger people decreases. These changes affect many areas of social and economic activity, including increased public expenditure on services for older people occurring simultaneously with a decrease in the proportion of the population who are of working age and contributing to taxation revenue (Meyer 1999: 32, Australian Bureau of Statistics 2002d, Australian Bureau of Statistics 2007i, Department of the Prime Minister and Cabinet 2008: 21). Older and younger populations have different needs in terms of housing, health services, leisure and education which have implications for demand for services in these areas (De Vaus 2002: 14, Department of the Prime Minister and Cabinet 2008: 2, Gray et al. 2008: 8).

Families are a significant support network for the elderly (Gray et al. 2008: 8). Smaller family sizes mean fewer children to help care for aged parents and increased childlessness results in larger numbers of older people not having children to assist with their care (Department of the Prime Minister and Cabinet 2008: 25, Gray et al. 2008: 8). Without such informal family care, there is likely to be greater demand for

formal care for the elderly through government funded programs (Australian Bureau of Statistics 2002c).

1.2.1 Public concern regarding Australia's fertility rate

Substantial media coverage has been given to the low fertility rate. Concern regarding the fertility rate has been particularly evident in Australia's print media (Gray et al. 2008: 1). Newspaper headlines have included:

“Declining birth rate a disaster” (Farr 2000)

“Women say no to babies” (de Kretser 2002)

“So, will you do it for your country?” (Farouque 2004)

“Births up but babies still a bump in women's career paths” (Murphy 2006)

In July 2004 the Australian Government introduced a one off universal payment of AUD3,000 to help with the extra costs of a new baby or adopted child which is commonly known as the ‘baby bonus’. As a result of concern regarding the low fertility rate and the ageing of the population, the former Federal Treasurer the Honourable Peter Costello when announcing the ‘baby bonus’ at a Budget press conference urged Australians to have more children asking them to have ‘one for the husband, one for the wife, and one for the country’ (cited in Newman 2008: 1) in an attempt to arrest fertility decline.

However, concern regarding Australia's fertility rate is not a new phenomenon (Australian Bureau of Statistics 1996b, Gray et al. 2008: 1). At various times since European settlement, Australian governments have expressed unease over low birth rates, considering population growth to be essential to the well being of the country (Australian Bureau of Statistics 2002d, Stanton 2002). There have been recurrent fears that a declining fertility rate will result in a ‘withering away’ or decline in the growth and prosperity of the nation (McNicoll 1995: 98, Mackinnon 2000: 110).

In 1904, a Royal Commission (the Decline of the Birth Rate and the Mortality of Infants) was established in New South Wales to determine reasons for the fall in the fertility rate (Australian Bureau of Statistics 1996b, Stanton 2002: 2, Gray et al. 2008: 1). Then in 1942 an official inquiry was launched by the National Health and Medical

Research Council of Australia into the low birth rate, a problem regarded to be ‘such as to cause, even now, the gravest anxiety about the future of the Australian people’ (cited in Stanton 2002: 3). After the Second World War concerns about the declining fertility rate focused on the need to increase the population in order to ensure Australia’s post war reconstruction and industrialisation, and the message ‘populate or perish’ was widely promoted (Weston 2004: 4, Gray et al. 2008: 8).

In recent times, attention has shifted to the implications of low fertility for the age structure of the population (Weston 2004: 4, Gray et al. 2008: 8). The public concern regarding the low fertility rate is mainly due to its putative effect on future prosperity (Barnes 2001: v, De Vaus 2002, Stanton 2002, Weston and Parker 2002). Nevertheless, others have welcomed Australia’s fertility decline because of the link between population pressures and environmental degradation (De Vaus 2002: 20, Mitchell and Gray 2007: 23, Gray et al. 2008: 8).

1.3 CONCLUSION

Substantial social and technological changes have taken place in Australia over the last forty years resulting in fertility rates, despite recent modest increases, that are below replacement level. As a result of technological changes such as the development of oral contraceptives and easier access to legalised safe abortion Australian women ostensibly now have greater control over their fertility, and are able to restrict conception and determine the progression of a pregnancy (Earle and Letherby 2002, Weisberg et al. 2008). Furthermore, social changes allow contemporary Australian women greater opportunities than women of previous generations to engage in other roles apart from motherhood such as paid employment and higher education which provide alternative sources of satisfaction to motherhood (Weston and Parker 2002: 8).

As a result, even though in the past the majority of Australian women married in their twenties and generally had children soon after, women are now more likely to delay having children and not commence their childbearing to their thirties and forties (if at all) (Australian Bureau of Statistics 2005, Department of the Prime Minister and Cabinet 2008: 31).

Yet, it is not well understood if Australia's low fertility rate actually reflects women's aspirations for childbearing and motherhood.

CHAPTER 2

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2 DESIRE FOR MOTHERHOOD

2.1 WHY DO WOMEN WANT CHILDREN?

Due to the decline in fertility rates in many Western developed countries much recent fertility research has focused on why women restrict their childbearing. Although such research assists in understanding why women do not have children, it contributes very little to understanding why women have children especially given that even in low fertility countries such as Australia most women want and have children (Weston et al. 2004).

The desire to have children is assumed to be universal with most societies being essentially pronatalist in that childbearing is usually encouraged and voluntary childlessness stigmatised; and parenthood is generally viewed as inherently positive and desirable, and a central life goal (Veevers 1973: 307, Callan 1982: 384, Newton et al. 1992: 25, Edelman et al. 1994: 292, Ulrich and Weatherall 2000: 323, Hagewen and Morgan 2005: 512, Dyer et al. 2008: 352).

The motives behind human procreation have been the subject of much speculation (van Balen and Trimbos-Kemper 1995: 137). A number of theories, concepts and approaches have been suggested in order to address the question of what motivates people to have children (Dyer et al. 2008: 352).

2.1.1. Biological drive to have children

Parenthood is usually regarded as natural life stage behaviour, and the social desirability of parenthood has led to the assumption that the desire for children is an inborn innate characteristic of human beings (Veevers 1973: 295, Veenhoven 1974: 495). Accordingly, fertility motivations are thought to have a biological root or drive (Bos et al. 2003: 2216, Heiland et al. 2008: 134). Udry (1996: 329) has suggested that there may be 'a biological basis for motivating behaviours that lead to childbearing'. Several attempts have been made to relate fertility behaviour including motivations

for having children to evolutionary theories or biological explanations (Kohler et al. 1999, Foster 2000: 210, Kohler et al. 2006: 50).

Kohler et al. (1999) used historic longitudinal same-sex twin data from the Danish Twin Registry to investigate the relationships amongst genetic dispositions and fertility and fertility-related behaviour. The ‘twin design’ of the study allowed the examination of shared-environment and genetic effects. They concluded that while genetic predispositions influence fertility motivations and desires social conditions were also important.

Foster (2000: 210-211) hypothesised that a biological predisposition for having children lies in inherited nurturing behaviours, rather than in having children per se, and that such nurturing behaviours begin to manifest themselves in infancy in response to environmental stimuli. Humans translate these predispositions into conscious but biologically based fertility motivation. Foster concludes that this ‘need to nurture’, although individually variable and subject to environmental influences such as reasonably favourable circumstances and normative pressures to have children, is strong enough to ensure that the majority of women will want to have at least one child despite the substantial costs to them of doing so.

Morgan and King (2001) explored arguments and theories regarding ‘why have children in settings where the net economic costs of children are clearly substantial?’ including both sociological arguments regarding the pronatalism (attitudes or policies which encourage childbearing) and antinatalism (attitudes or policies which limit childbearing) of societal institutions; and the argument that evolution has produced sets of genes that predispose people to childbearing by making sex and parenthood pleasurable. In terms of biological predispositions, they suggest that humans have genetically determined forms, sensitivities, and physical and emotional reactions that encourage sexual activity. These underlying genetic predispositions have historically led to sufficient births to sustain human societies (Morgan and King 2001: 5). The second biological predisposition they propose is altruism toward close kin. Specifically, if people experience interactions with close kin as especially satisfying or rewarding, then anticipation or the experience of rewarding parent-child relations are likely to motivate reproduction (Morgan and King 2001: 6). Nevertheless, Morgan

and King (2001: 8) conclude from their review that both genetic predispositions and social context influence fertility behaviour in developed countries.

Therefore, the evidence suggests that fertility motivations are not purely biological based and genetic influences may be only one of many factors which contribute to reproductive behaviour (Foster 2000: 228). Accordingly, it appears that psychological and social factors also play an important role. A number of researchers have suggested that there are psychosocial influences which motivate individuals to have children.

2.1.2 Psychosocial explanations of the desire for motherhood

2.1.2.1 Motherhood and womanhood

The prevailing ideology of motherhood in Western developed societies is based mainly on nineteenth century ideals and religious moral obligations which presume that motherhood is the primary identity for adult women (Veevers 1973, Arendell 2000: 1192). Most major religious groups (for example, Christianity and Islam) support and legitimise the belief that (married) women should want and have children (Veevers 1973: 292). Psychoanalytic theorists such as Freud have also shaped understandings of motherhood and womanhood, contending that motherhood is related to basic innate biological drives and psychosexual development. Women who do not have children are, therefore, viewed as ‘unnatural’ and can only be understood in terms of pathology (Veevers 1973: 296, Faux 1984: 133, Ireland 1993).

Accordingly, motherhood has been positioned as ‘natural’ and ‘normal’ for women (Veevers 1973, Woollett and Marshall 2000). It is frequently assumed that because women are physiologically equipped to bear children that becoming a mother is an essential component of being a woman (Robinson and Stewart 1989: 861). Motherhood has been seen as being critical to the development of female identity and femininity, and one way in which women can establish adult female status (Veevers 1973, Hoffman 1975: 431, Robinson and Stewart 1989: 861, Woollett and Marshall 2000, Hageman and Morgan 2005: 512). Motherhood has traditionally been perceived as a major adult role for women and normative behaviour for women (Hoffman et al. 1978: 100, Callan 1983: 262, Callan 1985, Brown 1992: 36, Edelman et al. 1994:

292, Gillespie 2000). In order to be considered a mature, balanced and fulfilled adult, a woman should be a mother (Wearing 1984: 42 & 72, Wilk 1986: vii, Ireland 1993: viii, Lee 1998, Ulrich and Weatherall 2000: 324, Tietjens Meyers 2001).

Women who do not become mothers are often regarded in societies such as Australia that value children and motherhood, even if that value is not structurally supported, as unfeminine, deviant or abnormal, and subjected to pressure to conform and have children (Rowland 1982, Callan 1983, Letherby 1999, Hagewen and Morgan 2005: 512). Women who are not mothers, regardless of the reasons, are often identified using terms that imply a deviation from the norm or a deficiency of central importance to their feminine identity, for example, 'childless', 'childfree' or 'not a mother' (Ireland 1993, Letherby 1994, Ulrich and Weatherall 2000: 324).

Studies investigating the relationship between motherhood and female identity, their methods and relevant findings are outlined in Table 2.1.

Table 2.1 Studies investigating the relationship between motherhood and female identity

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Hare-Mustin et al. (1983) USA	To examine attitudes toward mothering and motherhood	N=274 (98 men, 120 women and 56 mothers) Representative sample of college educated young adults and their mothers from a major metropolitan area	Self administered questionnaire incorporated: Motherhood Inventory (Hare-Mustin and Broderick 1979) Attitudes Toward Women Scale (Spence and Helmreich 1972)	Participants did not regard motherhood as necessarily 'natural' for a woman or central to her personhood and identity.
Faux (1984) USA	To explore the social, cultural and political implications of childlessness	N=69 Highly ambivalent women who had decided to be childless (n=63) and ambivalent mothers (n=6)	In-depth interviews Questionnaire (n=20)	Participants felt that womanhood does not equal motherhood.
Wilks (1986) USA	To analyse the childbearing intentions of three distinct groups of childless dual career women in a qualitative study	N = 24 3 groups: decided to have children in the future; decided not to have children; and unable to decide	Qualitative interviews	Participants questioned identification with traditional femininity but still felt feminine.
Ireland (1993) USA	To explore the meaning and place of women who are not mothers	N=100 Voluntarily and involuntarily childless women Snowball recruitment – friends and TV interview response	In-depth interviews Written questionnaire included Bem Sex Role Inventory (Bem 1974)	Identified 3 types of childless women: traditional, transitional and transformative. Each represents a different perspective from which a woman responds to the social expectation of motherhood.
Marshall (1993) Australia	To explore voluntary childlessness	N=22 childless people interview and case study group	Study specific questionnaire Semi-structured interviews	Childless work within ideology of parenthood instead of opposing it.

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
		<p>N=97 questionnaire</p> <p>Recruited via snowballing technique (started with friends and as result of a newspaper article)</p>	(case study group)	Childless aware of pressures to have children but refuse to conform to this mandate.
Morell (1993) USA	To explore another view of women's development which allow for the variations in desires, talents and orientations that actually occur among women	<p>N=34</p> <p>Intentionally and permanently childless women</p> <p>Recruited through network sampling and advertising</p>	<p>Qualitative interviews</p> <p>(26 interviewed in person and 8 interviewed by telephone)</p> <p>Completed autobiographical exercise prior to interview</p>	<p>Maternal status was not part of these women's identity.</p> <p>Women defined themselves by what they did do and had done rather than what they had not achieved.</p> <p>Most regarded themselves as competent and complete women.</p>
Gillespie (1999) UK	To explore to what extent women are rejecting motherhood and choosing to remain childless in a qualitative study	<p>N=25</p> <p>Voluntarily childless women</p> <p>Recruited from a family planning session in a large city in the south of England</p>	In-depth semi-structured interviews	<p>The choice to remain childless is linked to a rejection of motherhood and the activities associated with it.</p> <p>Findings have implications for understandings of femininity.</p>
Cannold (2002) Australia & USA	To examine women's explanations for their desire to have children in a qualitative study	<p>N=35</p> <p>Childless Australian and North American women</p> <p>Aged 28-42 years</p> <p>Snowball recruitment and advertisement in women's health newsletters</p>	<p>Life history interviews (semi-structured, face to face)</p> <p>Short questionnaire (demographic details)</p> <p>Grounded theory approach</p>	Participants identified motherhood as a way of confirming their femininity and adulthood.

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Ulrich and Weatherall (2000) NZ	To analyse how women who wanted children but who could not easily have them constructed their desire for children, motherhood and their infertility in a qualitative study	N=19 Infertile women Responded to advertisements	Semi-structured interviews Questionnaire (demographic information) Feminist discourse analysis	Motherhood was identified as physical, psychological and social completeness, and fulfilment for women.
Vissing (2002) USA	To explore the personal and social experiences of childless women	N=125 Childless women Snowball recruitment	Interviews Grounded methodology	Participants felt that motherhood was tied to women's identity.
Gillespie (2003) UK	To consider why individual women choose to remain childfree and how this might inform broader understandings of gender identity	N=25 Voluntarily childless women ('active deciders') Recruited from family planning clinic, self selected	Semi-structured interviews	Findings establish the existence of a more radical rejection or push away from motherhood as a normative female gender marker.

Many women themselves view motherhood as essential to, or a way of confirming adult female identity and a social expectation (Woollett 1991: 51, Ireland 1993: 161, Ulrich and Weatherall 2000: 323, Cannold 2002: 5). Many of the participants interviewed in Vissing's (2002) research on the personal and social experiences of childless women in the USA, felt that motherhood was tied to women's identity. One participant stated 'part of me feels as though I'm not a 'real woman' because I can't have kids' (Vissing 2002: 18). Accordingly, it has been suggested that the nearly universal desire to be a mother reflects the salience of motherhood in female identity and the impact of strong norms against childlessness (Quesnel-Vallée and Morgan 2003: 500). However, these investigations have mostly examined involuntarily childless and infertile women.

In contrast, other women feel that motherhood is not essential to their feminine identity and conclude that motherhood is an irrational choice to make (Hare-Mustin et al. 1983: 654, Faux 1984, Wilk 1986, Morell 1993, Gillespie 1999: 43, Gillespie 2003: 133). These women may feel like complete and competent women without experiencing pregnancy or motherhood, and affirm their femininity in ways that are not dependent upon motherhood. However, most of these studies have investigated the experiences of voluntarily childless women (for example, Faux 1984, Marshall 1993, Morell 1994). As Marshall (1993: 139) notes, voluntarily childless women may be able to resist social pressures concerning the appropriate roles for women and having children due to their relatively privileged position in terms of education and occupational status, and supportive networks compared to other women in the general population.

Furthermore, most studies which have examined the relationship between motherhood and female identity have small sample sizes (typically 35 or less participants) and non representative samples (most participants are childless, and were recruited through snowballing or self selection). As a result of these methodological limitations, it may not be possible to generalise the findings to women in the general population.

2.1.2.2 Value of children

It has been argued that where having a child is a matter of 'choice', a person must have a reason or reasons for doing so (Gibson 1995: 233). The general assumption is that the desire to have a child is based on one's motivations or more specifically the values one assigns to a child. Values are one of a class of hypothetical constructs of psychological tendencies or dispositions to act in particular ways (Hechter et al. 2005: 91). The values a woman holds with respect to children might determine whether or not she has a child in the first place and the number of children she might want to have (Sam et al. 2005: 356).

In the 1970s the Value of Children (VOC) study (Arnold et al. 1975) was conducted to explore individuals' perceptions of the advantages and costs of having children as well as their consequent impact on actual fertility behaviour. The study was based on the theoretical work of Hoffman and Hoffman (1973) in which the value of children was conceptualised in terms of the psychological satisfactions they provide for parents. It was argued that an understanding of the values concerning children could assist in explaining fertility behaviour and motivations, and the emphasis on benefits would assist in explaining why people intend to have a first or another child (Hoffman et al. 1978: 105, Bühler 2008: 571).

The VOC Study was a cross-national study of more than 20,000 married couples (the women were of childbearing age and aged less than 40 years). The study was conducted in Korea, Indonesia, the Philippines, Taiwan, Thailand, Turkey and the USA in 1975 (Hoffman et al. 1978: 93). Most participants (approximately 75 percent) in the portion of the study conducted in the USA were parents (Hoffman and Manis 1979). The early 1970s were a time when overpopulation was of widespread concern and accordingly, the ultimate intention of the VOC study was to propose effective policy which would reduce the pace of population growth (Yi et al. 2008: 372).

One of the main aims of the study was to examine the benefits or advantages ('values') that children provide for their parents. The primary measure of the value of children was based on the following open ended question: 'I want to ask you about the advantages and disadvantages of having children. First – what would you say are

some of the advantages or good things about having children compared with not having children at all?'. The answers were coded and organised around the nine value categories identified by Hoffman and Hoffman (1973) (outlined in Table 2.2).

Table 2.2 Values of children

Value Category	Description
1. Adult Status and Social Identity	Parenthood establishes a person as a mature, stable and acceptable member of the community. This is especially true for women, for whom motherhood is also defined as their major role in life.
2. Expansion of the Self	Having children is a way of reproducing oneself, having one's characteristics reflected in another who will live longer, and thus attain a kind of immortality. 'Carrying on the family name' or 'continuation of the family' are also reasons for having children that fall under this category.
3. Morality	Childbearing is often viewed as a moral act – one that involves giving up one's own interest for the sake of others, community welfare, religious tradition or norms.
4. Primary Group Ties, Affiliation	The affiliative value of children is particularly important and has been reported in a wide variety of cultures.
5. Stimulation, Novelty, Fun	Having children introduces major change in one's life. Observing children grow, develop and change provides opportunities and experiences of novelty and variety. Children also add an element of pleasure, fun and excitement.
6. Creativity, Accomplishment, Competence	Rearing children provides an outlet for the needs for creativity, achievement and accomplishment.
7. Power, Influence, Effectance	In some cultures parenthood dramatically changes the power of the parent, particularly the mother.
8. Social Comparison	Children can provide their parents with prestige and competitive advantage in a number of ways.
9. Economic Utility	Children in developing countries particularly in rural areas are valued for economic reasons in terms of the work they perform when they are young and the old age security they provide for parents. The economic value of children decreases in importance with increased industrialisation and urbanisation.

Source: Hoffman and Hoffman (1973)

Three main types of benefits of children, based on the nine different values identified by Hoffman and Hoffman (1973), were revealed in the VOC study: economic/utilitarian, psychological and social. The economic/utilitarian benefits include children's material benefits such as their contribution to the household economy and household chores, and old age security for their parents. The psychological benefits of children include the joy, fun, companionship, pride and

sense of accomplishment parents derive from their children. The social benefits of children refer to the social acceptance and status people gain when they have children, and continuation of the family name and family traditions (Kagitcibasi and Ataca 2005: 318, Liefbroer 2005: 368).

Data from the portion of the study undertaken in the USA revealed that the first six most important values were psychological and included 'primary group ties and affection', 'stimulation and fun', 'expansion of the self', 'adult status and social identity', 'achievement and creativity' and 'morality'. 'Economic utility' was perceived as the least important and ranked last (Hoffman and Manis 1979). While 'primary group ties and affection' were the most commonly mentioned value of children cited by both parents and nonparents, there were some differences in the importance of the other values to parents and nonparents. For example, parents more than nonparents cited 'stimulation and fun' as important, the 'achievement' values were cited more often by nonparents than parents, but there was only a slight difference between parents and non parents in the importance of the 'expansion of the self' value (Hoffman and Manis 1979).

The VOC study was important in demonstrating why people want and have children. The VOC study also indicated that different types of values are attributed to children by different people and these different values are differentially affected by economic development (Kagitcibasi and Ataca 2005: 318). The USA was the only developed Western country included in the VOC study and therefore, the most comparable country to Australia and as such the only country's results that may be able to be generalised to the Australian context.

Although inherent in the VOC study was the notion of the 'multidimensionality' of the benefits parents may receive from their children, a coherent theoretical framework from which these dimensions could be systematically derived was missing (Nauck and Klaus 2007: 489). Furthermore, although the VOC study was cross cultural, the subsequent analyses were mostly restricted to individual country reports and not utilised for comparative evaluations (Nauck and Klaus 2007: 488). Another limitation of the VOC study was its cross sectional design. Given that values are directly influenced by everyday experiences in changing social contexts, it has been suggested

that it is important that they are studied over time in order to capture any changes that may have occurred (Sam et al. 2005: 356).

Accordingly, the VOC study was replicated in 2002/3 in order to overcome the theoretical limitations of the original VOC study and to investigate variability in the value of children for their parents across different societies. The replication VOC study was based on samples of different age groups in eleven countries: South Korea, the People's Republic of China, Indonesia, India, Palestine, Israel, Turkey, South Africa, Ghana, Germany and the Czech Republic (Nauck and Klaus 2007: 487). The replication VOC study was conducted at a time where concerns about overpopulation had changed to concerns about under-population for many countries (Yi et al. 2008: 372). The data set contains 10,462 completed interviews, with a quota of rural and urban settings within every country. In order to measure the perceived value of children, the respondents were all given the following statement: 'I have a list of reasons people may give for wanting to have children in general. . . . Think about your experience with your own (child/children) and tell me how important the following reasons for wanting to have children are to you personally.' A five-point Likert-type response format was employed ranging from 'not important at all' (1) to 'very important' (5) (Nauck and Klaus 2007: 491).

The VOC approach was reconceptualised in the replication study as a special case of the general theory of social production functions where humans strive to maximise at least two things: social esteem and physical wellbeing (Nauck 2007: 616, Nauck and Klaus 2007: 489). Social esteem is the extent to which people receive positive social reinforcement from their social context, and physical wellbeing is the extent to which people are able to secure their physical survival (Nauck 2007: 616). Children contribute both directly and indirectly to the social esteem of their parents by creating new relationships, improving the quality of existing relationships and by being a status symbol (Nauck 2007: 617). Children may contribute to their parents' physical wellbeing by contributing to household production and providing physical and psychological stimulation (Nauck 2007: 617).

The analysis of the results revealed a three dimensional structure of comfort, social esteem and affect. The comfort factor consisted of items related to support in old age,

the affect factor included items related to affectionate intergenerational relationship including ‘pleasure watching children grow’ and ‘feeling of love between parent and child’, and the social esteem factor included items related to the importance of the family and social approval (Nauck and Klaus 2007: 492). It was found that the importance of children for comfort and esteem was highest in high fertility countries such as Ghana, Indonesia, India, South Africa and Palestine with lineage-based kinship systems (the emphasis on the descent lineage offers incentives for social esteem through parenthood) and low affluence (children provide an available and reliable source of social support), while it was lowest in low fertility countries with high affluence and a state based insurance system which provides social security (Nauck and Klaus 2007: 490). Affect was very high across all countries suggesting that affect is a constant factor scarcely influenced by social conditions and contextual opportunities (Nauck and Klaus 2007: 487 & 490).

Parity and the value of children

The motives for having the first child may differ from the motives behind having the second and third child (Lalos et al. 1985: 476). Therefore, the values discussed by Hoffman and Hoffman (1973) may be of different relevance, depending on which parity is considered.

A relationship was found in the original VOC study between three values and desired family size. Respondents who stated that ‘adult status and social identity’, ‘morality’ and ‘economic utility’ as advantages of children were more likely to desire larger family sizes than those who did not report these values (Hoffman and Manis 1979: 595). Hoffman and Manis (1979: 595) note that the values associated with a higher number of desired children are the ones that are least often expressed in low fertility, developed countries such as the USA but are more common in high fertility countries. Kagitcibasi and Ataca (2005: 318) argue that this is because the financial and material contribution of each child accumulates with more children providing more benefits, whereas psychological satisfactions such as love and joy can be provided by one or two children and further children do not necessarily add more. Therefore, in countries where there is little economic benefit in having children it is better for parents to have few children so that they are able to invest strongly in their children’s education

(Weston and Parker 2002: 9). Kohlmann (2002: 32) maintains that one child might be enough to achieve the emotional benefits of having children, and there may be a threshold above which the additional psychological benefits of having more children are limited due to marginal utility. Furthermore, restricting family size may even increase the chances of receiving some benefits. Economic considerations also appear to be important in setting an upper limit to the number of children desired (Hoffman and Manis 1979: 595).

Studies of the value of children indicate that the rationales for having first and second children differ from those for higher order births (Morgan 2003: 592-3). Bulatao (1981) using data from interviews about the values of children with nationally representative samples of wives and husbands from the Philippines, South Korea and the USA, showed that first children were desired for affective reasons whereas the motivation for second children was 'family building' in particular providing a sibling for the first child. Second and third births were also desired for balancing the sex composition of the family. Higher order births served primarily economic functions.

2.1.2.3 Social capital of children

The Value of Children studies, by placing particular emphasis on values regarding the benefits individuals expect to receive from a child, have made a substantial contribution to understanding the phenomena of both declining fertility and why people in contemporary societies still want to have children (Bühler 2008: 570). Nevertheless, the VOC studies have been criticised as being insufficient as it has been argued that psychological satisfactions alone cannot explain fertility behaviour, and that social aspects such as social norms or the achievement of social status also play an important role (Van Peer 2000: 5, Kohlmann 2002: 31).

An alternative framework to the VOC approach has been suggested by Schoen et al. (1997) which introduces the idea of children as providing social capital. Social capital is a sociological concept that originated in the 1970s and is an extension of social exchange theory which refers to the 'resources that emerge from one's social ties' (Astone et al. 1999). The theory of social capital argues that individuals invest in

personal relationships in order to influence the related exchange processes (Bühler 2008: 572).

Children create social capital by providing access to and expanding and strengthening their parents' social networks and ties among people such as parents, grandparents, aunts, uncles, siblings, friends, which also give indirect access to resources located with other network members. This social capital is then available to their parents to use as 'resources that they can use to achieve their interests' (Coleman 1988: S101). Accordingly, individuals are motivated to have children because they expect that these children will benefit their social networks (Kohlmann 2002: 31, Bühler 2008: 572). Schoen et al. (1997: 339) argued that children's value as social capital was an especially important motivator for childbearing in low fertility societies where the economic value of children to their parents no longer exists but children's value as a social resource continues.

Schoen et al. (1997) used data from the 1987-88 National Survey of Families and Households (USA) to determine why Americans want children. The study sample consisted of respondents (n=4,358) who were either white (non-Hispanic) or black, neither infertile nor pregnant, and aged between 16 and 39 years.

Respondents were presented with 'a list of things that some people consider when thinking about having a child or another child'. Each item was ranked on a seven point scale ranging from (1) not at all important to (7) very important. Factor analysis of the responses revealed three factors: children as social resources which included items such as 'giving my parents grandchildren' and 'having someone to love'; the economic costs of children which included items such as 'uncertainty about my ability to support a child' and 'being unable to make major purchases'; and career which consisted of one item 'having time and energy for my career'. They found that the social resource value was the prime motivator for childbearing regardless of parity, race and gender, and that most Americans would like to have children because of the relationships they create or their 'social capital' effect (Schoen et al. 1997).

A limitation of the social capital approach to childbearing motivations is that investigations to date have been limited to US data. Therefore, in order to determine if

the results are specific to the US or whether they are also present in different social contexts investigations would need to be conducted in other countries (Bühler 2008: 571).

2.1.2.4 The structural value of children

Bühler (2008) incorporated the theories of the value of children, social capital and social networks to provide another perspective on the motivations for having children. Bühler (2008) argues that the 'structural value' of children is important in childbearing motivations. Children are beneficial in that they alter their parents' personal networks and exchange relationships, and create opportunities for parental status enhancement, the generation of prestige or growing influence. These changes give parents access to resources and advantages they did not have before. Hence, children have a structural value to their parents as their birth results in advantageous direct and indirect alterations in the parents' social networks.

Bühler (2008) explored the relevance of the structural value of children to childbearing by examining its association with the fertility intentions of Bulgarians. Data were analysed from the first wave of the Bulgarian panel survey 'The Impact of Social Capital and Coping Strategies on Reproductive and Marital Behavior' conducted in 2002. Female respondents were aged between 18 and 34 years and respondents who self-identified as being infertile or pregnant were excluded from the analyses resulting in a sample size of 3,495. Participants were asked whether or not they intended to have a first or subsequent child within the next two years. Attitudes to fertility intentions were measured by asking participants to indicate their level of agreement or disagreement to statements about particular child-related benefits or costs. Three statements covered aspects of the structural value of children: an expected increase in closeness both with their partner, and parents and relatives, and greater security in old age.

The results indicate that a first child is associated with the prospect of a closer relationship with their partner, and parents and other relatives (76.4 percent of female respondents and 84.9 percent of male respondents agreed with this statement). The prospect of security at old age was the structural benefit of least relevance. Many

respondents expected that the birth of a first or second child would improve their social environment. The prospect of security in old age was the structural benefit of least importance. Similar to Schoen et al.'s (1997) results, these findings indicate that structural evaluations are positively correlated with individual's motivations to have children (Bühler 2008: 593).

The Value of Children, social capital and structural value of children approaches all examine the value of children within the process of fertility decision-making. However, they all take a slightly different theoretical approach and accordingly, emphasise different benefits to parents of having children. The Value of Children perspective examines economic, psychological and social benefits, while the structural value and social capital approaches overlap in investigating the social benefits of children.

2.1.2.5 Other psychosocial motivators for children

Other studies have also identified psychosocial reasons as important motivators for childbearing with a number of psychosocial reasons identified.

Studies which have examined psychosocial motivators for children and collected data from both women and men, and their main findings are summarised in Table 2.3.

Table 2.3 Studies investigating psychosocial motivators for parenthood

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Ramu & Tavuchis (1986) Canada	To examine the values affecting decisions with respect to childlessness and parenthood in a comparative study	N=58 women and men (couples with children) N=57 women and men (childless couples) Recruited through advertisements in the local media	Mailed questionnaire which included a series of attitudinal statements and an open ended question on the reasons for childlessness or parenthood based on the values of Hoffman & Hoffman (1973)	'Affect' concerns were the primary determinant of parenthood. Children were regarded as crucial for the satisfaction of emotional needs, and viewed as a source of pleasure, happiness and relaxation.
Neal et al. (1989) USA	To examine attitudes toward children in a proportionately stratified, random sample of US married couples	N=610 White married couples Wives of childbearing age (< 39 years) Although parity was used as a control in the analyses, the actual parity of participants was not reported. Sample generated from computerised records	Self administered questionnaire Advantages of children question based on a value of children approach: 'listed below are several advantages some people see of having children. For you personally, how important is each of the following as a reason for wanting or having children?'	The primary advantages of children were that children are necessary for 'having a real family life' and children were regarded as sources of love and affection. Few couples regarded children as being important for establishing oneself as a mature person or spiritual fulfillment.
Somers (1993) USA	To investigate reasons for becoming a parent in a cross-sectional study	N=127 parents (69 women and 58 men) Several recruitment methods including newspaper advertisement and snowballing	Study specific questionnaire No existing theoretical approach was incorporated or tested in the study to measure motivation for parenthood	Participants ranked the love of children, pride and achievement from parenthood, pleasure in daily childrearing activities, and the companionship of children as the most important reasons for their decision to parent.
Langdridge et al. (2005)	To examine the reasons for wanting and not wanting a child in a cross-sectional	N=897 (393 men and 481 women)	Questionnaire Included scale of reasons for parenthood developed from the	'Biological drive', 'Raising a child would be fulfilling', 'My partner would be pleased if I had a child', and 'I feel it would make us a family' were the

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
UK	population based study	White married childless couples aged 18-40 years Random sample obtained from marketing company database	literature in particular value of children approach and work of Schoen et al. (1997)	reasons women commonly endorsed for wanting to have children. Results indicate there are many reasons for wishing to have children.
Stöbel-Richter et al. (2005) Germany	To examine motives for and against having children in a representative survey	N=785 women (67.7% mothers) N=795 men (50.4% fathers) Sample recruited by market research institute	Motives for having a child were measured by the Leipzig questionnaire which includes twenty items on four scales: (1) the desire for emotional stabilisation and finding meaning; (2) fear of personal constraints; (3) desire for social recognition; and (4) fear of financial constraints.	Overall, emotional aspects such as to create life and to experience the love for a child were rated as the strongest motives particularly for women. Gaining social recognition by parenthood was also an important motivator for having a child especially for women.
Purewal & Akker (2007) UK	To assess the meaning and desire for parenthood in a qualitative study	N=13 6 women (2 mothers) 7 men (3 fathers) Snowball sampling	Semi-structured interviews	The participants shared a common belief that parenthood was desirable and natural, five key issues emerged: 1. parenting as selfless; 2. the fulfilling role of parenting; 3. the importance of genetic ties; 4. the importance of joint decision making; and 5. being prepared for parenthood.

Children are viewed as critical to a full and happy life (Callan 1985: 1, Wilk 1986: xv); parenting is seen as growth, as adding to the meaning of life and ensuring continuity for parents (Hoffman et al. 1978: 99, Woollett 1991: 47); children bring interest and variety to their parents' lives (Woollett 1991: 47); children provide psychological satisfactions such as joy, pride, love and companionship to their parents (Kagiticbasi 1997); children symbolise social maturity and adult status (Callan 1985: 125); and the joy and sense of achievement of seeing children develop into adults is often cited by parents as one of the main benefits of children (Woollett 1991: 47). Parenthood is also regarded as the fulfilment or meaning of marriage (Veevers 1973: 292).

These studies either utilise a specific existing theoretical approach such as Ramu and Tavuchis (1986) and Neal et al. (1989) who take a value of children approach; or attempt to integrate existing theoretical approaches, for example, Langdridge et al. (2005) who incorporate both the value of children approach and the work of Schoen et al. (1997); or do not incorporate or test an existing theoretical approach regarding the motivation for parenthood, for example, Somers (1993).

However, several of these studies have investigated reasons for parenthood retrospectively (for example, Somers 1993). It is likely that the experience of parenting a child will affect the reported motivation for parenthood.

2.1.2.6 Childbearing motives of infertile women

Developments in reproductive technology, both contraceptive and proceptive, have impacted upon the nature of childbearing. Contemporary couples who experience fertility problems now have a number of options available, including medical treatments such as in vitro fertilization (IVF) (Langdridge et al. 2000: 321-322). Although only 17.3 percent of all the assisted reproductive technology (ART) treatment cycles undertaken in Australia and New Zealand in 2006 resulted in the birth of at least one live born baby (Wang et al. 2008), people still pursue such treatments in the hope of satisfying their desire for a child (Langdridge et al. 2000: 321-322).

Infertile women often face more scrutiny about their motives for having a child than fertile women may be subjected to. The experiences of infertile women in developed Western countries have been examined in order to further understand the motivations for motherhood as such women may have been 'forced' to reflect more on their motives for wanting children than fertile women (Dyer et al. 2008: 352).

Results from empirical studies investigating the childbearing motives of infertile women are summarised in Table 2.4.

Table 2.4 Studies investigating the reasons for motherhood in infertile women

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Lalos et al. (1985) Sweden	To investigate why people want to have children in a comparative study	N=30 Infertile women (and their male partners) Infertile couples' motives compared to three reference groups: two groups of pregnant women (n=131) and a group of women applying for legal abortion (n=459). Recruited from a university hospital	Interviews Participants answered an open-ended question regarding their wish to have a child and were then asked to choose from a list of 36 alternatives a maximum of five motives for having a child	The motives of the infertile couples did not generally differ from those of the reference groups. In response to the open ended question most answered "it's just a feeling". The motives on the list were categorised as 'philosophical', 'social/cultural', 'interpersonal' and 'intrapsychic'. The most common motive for women in all groups was that a child is the ultimate expression of love between a man and a woman.
Newton et al. (1992) Canada	To investigate motives for parenthood in an exploratory study of couples undergoing IVF treatment	N=213 women N=184 men Couples admitted to an IVF program at a university teaching hospital	The Reason for Parenthood questionnaire	The motives identified as important were gender role fulfilment, marital completion and a desire to alleviate social pressure. Women placed greatest emphasis on fulfilling gender role requirements.
van Balen & Trimbos-Kemper (1995) The Netherlands	To examine the motives for wanting a child	N=108 Involuntarily childless couples (108 Women and 102 men) Participants recruited from a fertility clinic	Interview and questionnaire Developed and used the Parenthood Motivation List which includes six types of motives: 1. Happiness; 2. Wellbeing; 3. Motherhood/Fatherhood; 4. Identity; 5. Continuity; and 6. Social control	'Happiness' was the most frequently mentioned category of motives for wanting children for women followed by 'motherhood'. 'Social control' and 'continuity' were seldom reported as motives.
Colpin et al. (1998)	To examine whether IVF mothers' motivation for	N=31 IVF mothers with first and	Parenthood Motivation List (van Balen and Trimbos-	Overall, the motivation pattern was similar for both groups of mothers with happiness being the main

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Belgium	parenthood differed from that of mothers who had naturally conceived in an exploratory study	single born child aged 24-30 months N=31 mothers who naturally conceived Recruited from a university hospital	Kemper 1995)	reason for wanting children followed by wellbeing, motherhood, identity, continuity and social control. However, the IVF mothers rated 'identity', 'motherhood' and 'social control' as significantly more important motives.
Langdridge et al. (2000) UK	To examine perceived reasons for wanting a child in a network analytic study	Three groups of participants: N=10 married couples expecting their first baby N=10 couples presenting for IVF treatment N=14 couples presenting for donor insemination (DI) Recruited from antenatal and fertility clinics	Participants were shown 24 reasons for wanting to have children (for example, 'I want a child because I want to carry on the family line' and 'I want a child because of the enjoyment and fun a child could give'), and asked to select the reasons they felt had influenced their own desire for a child. Semi-structured interviews	The results were similar between the three groups with the most important reasons being the need to give and receive love, and experience the enjoyment of children. These reasons were viewed by the participants as interconnected and not distinct reasons. None of the participants identified social pressure reasons such as 'religion', 'pressures from family' or 'pressure from friends' as important suggesting that these factors do not play or only play a minor role in the motivation for parenthood. A variety of intersecting reasons for wanting children were given including that motherhood was biologically determined and a 'natural instinct'; 'a stage in the development of a relationship'; and a 'social expectation'.
Ulrich & Weatherall (2000) New Zealand	To investigate desires for children and motherhood in a qualitative study	N=19 Women who wanted children but could not easily have them Responded to advertisements	Parenthood Motivation List (van Balen and Trimbos-Kemper 1995)	Most participants endorsed the six motives measured by the List. Happiness and parenthood were the most frequent motives. The majority of the participants agreed with several motives simultaneously and none had a single motive indicating the children are desired for many reasons. For women, happiness was both the strongest and the most frequently endorsed motive.
Dyer et al. (2008) South Africa	To explore motives for parenthood using a structured instrument	N=50 Infertile couples from an urban community 50 women (16 were mothers) 50 men (22 were fathers) Recruited from public infertility clinic		

Studies which have explored motives for parenthood among infertile women suggest that there are many motives for parenthood, and parenthood meets a diversity of needs (Newton et al. 1992). However, parenthood is mostly desired for the expected feelings of love, personal happiness and fulfilment; while motives relating to social reasons and norms feature less prominently (van Balen and Trimbos-Kemper 1995: 143, Dyer et al. 2008).

However, there are some methodological limitations of the studies which have investigated the parenthood motivations of infertile women. First, the factors which have been identified as important reasons for wanting children in previous research are not always assessed. For example, as Langdridge et al. (2000) noted, the studies by Newton et al. (1992) and van Balen and Trimbos-Kemper (1995) did not investigate the importance of primary group ties and affection which have been shown in research with people with no known fertility difficulties to be salient motivators. Second, parenthood motives are often studied retrospectively (for example, Colpin et al. 1998) and some studies have only examined mothers (for example, Colpin et al. 1998). It is likely that the success of fertility treatment and the experience of actually caring for a child will affect the reported motivation for parenthood. Third, with the exception of a few studies (Colpin et al. 1998, Langdridge et al. 2000), studies do not always compare fertile and infertile couples' reasons for parenthood. Finally, several studies (for example, Dyer et al. 2008) have used the Parenthood Motivation List (van Balen and Trimbos-Kemper 1995). The List implies that motivations for parenthood are rational, conscious constructs. However, it has been suggested that motives for parenthood also include unconscious aspects (Colpin et al. 1998: 24), although these are rarely investigated.

2.1.2.7 Childbearing motives of lesbian women

Becoming pregnant is more complex for lesbian women than it is for fertile heterosexual couples. The increased access to donor insemination since the 1980s has made it easier for lesbian women to become mothers (Bos et al. 2003). Nevertheless, there has been little investigation of the desire and motivation for children in planned lesbian families in which the child is born to the lesbian relationship. In the Netherlands, Bos et al. (2003) examined whether planned lesbian parents (n=100)

differed from heterosexual parents (n=100) in their desire and motivation for a child. Data were collected by questionnaire which included the Parenthood Motivation List (van Balen and Trimbos-Kemper 1995). Lesbian parents and heterosexual parents ranked their motives for parenthood quite similarly. Motives such as 'happiness' and 'parenthood' were the most important, and 'social control' was the least important. However, lesbian parents spent more time thinking about the reasons for wanting to have children than heterosexual parents, and their desire to have a child was stronger. A methodological limitation of this study is that motives for parenthood were studied retrospectively so as previously identified it is likely that the experience of caring for a child may have affected the reported motivation for parenthood.

2.1.2.8 Australian studies

Little is known about why Australian women want to have children despite its importance in understanding current fertility levels (McDonald 2002b: 7, Weston and Parker 2002). Traditionally in countries such as Australia children were an economic asset. Children were resources who contributed to the family economy and supported their ageing parents. However, Australia has shifted from an agricultural society to an industrialised one with increased urbanisation. Three quarters of the Australian population currently lives in urban areas (Australian Bureau of Statistics 2006d), and Australia has a government welfare system which provides income support, including age pensions and unemployment benefits, and health and education services for both parents and children (Australian Bureau of Statistics 1994).

Furthermore, in developed countries such as Australia the financial costs of raising children are significant. The cost of raising a first child from 0 to 18 years in Melbourne, Victoria has been estimated to be AUD330,535 which assumes a modest but adequate living standard (Henman 2008). The estimated cost includes housing, food, clothing, leisure, childcare, health and transport components. However, the cost of raising a child varies as it is influenced by the situations of the household such as geographical location and household income. For example, the cost of raising a child is likely to be greater for higher income households (Henman 2008).

There are also considerable constraints imposed on women's life circumstances of having children. These include direct financial costs and indirect opportunity costs such as unwaged time out of the paid workforce. Accordingly, given that in developed countries such as Australia children are of little economic benefit to their parents, why do most Australian women continue to want and have children, and Australia's fertility rate not fall to zero?

Most investigations of the motivators for motherhood have been conducted overseas in countries such as the USA, Canada, the UK and the Netherlands. Although such developed Western countries may be comparable to Australia in many ways, Australian specific studies are required to determine whether the motivators identified are also present in the Australian context. A few Australian studies have investigated motives for parenthood. The methodologies and major findings of these studies are shown in Table 2.5.

Table 2.5 Australian studies investigating motives for parenthood

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Callan (1980) Australia	To explore the major advantages and disadvantages of having children in a cross-cultural study	N=717 parents (48.8% men, 51.2% women) Married Australian couples Mothers aged < 40 years Respondents were born in Australia, or were born in Greece or Italy and had immigrated to Australia Households randomly selected from the Sydney metropolitan area and snowballing recruitment	Interviews Open ended question: 'To you personally, what are some of the advantages in having children compared with not having them at all?' Structured measure: list of 63 attitude items developed from the Value of Children study (Arnold et al. 1975)	The most frequently mentioned advantage referred to the happiness that children afford such as 'they bring me a lot of joy'. The results emphasise the salience of psychosocial factors in having children.
Callan & Wilks (1984) Australia & Papua New Guinea (PNG)	To compare perceptions of the advantages and disadvantages of having children in Australia and PNG	N=329 Australian (216 male and 113 female) N=281 Papua New Guinean (195 male and 86 female) Year 9 High school students Questionnaire given to all year 9 students at selected schools (3 schools in PNG and 4 schools in Australia)	Study specific questionnaire	The economic benefits of children such as providing support in old age, economic assistance and help in the family business were more important to PNG students than Australian students. Australian students emphasised more than the PNG students the psychological benefits of having children such as the pleasure, pride, fulfilment and achievement in having children, and the love and companionship of children.
VandenHeuvel (1991)	To examine the value of children in a cross-sectional population based	N=4,511 (51% women)	Secondary analysis of data from the National Social Science Survey 1989	Overall, children were not perceived to be a 'burden' and despite the high financial cost of children only 3% of the respondents thought that it was better not to

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Australia	study			<p>have children because they are such a significant financial burden.</p> <p>Over 80% of respondents believed that children enrich life.</p> <p>Children were also valued for their companionship and their ability to provide help and security when their parents were old.</p>
Cannold (2002) Australia & USA	To examine women's explanations for their desire to have children in a qualitative study	<p>N=35 Childless Australian and North American women aged 28 to 42 years</p> <p>Snowball recruitment and advertisement in women's health newsletters</p>	In-depth interviews	<p>A wide range of reasons were given for the desire to have children including the desire for the responsibility and commitment children require, the desire to take risks and to face new life challenges, to satisfy and/or to keep their partner, to fulfil their (positively-viewed) imagined future as a mother, to guard against loneliness, to love and to be loved by a child, to confirm their femininity and adulthood, to remain 'in-step' with their peers, to avoid loneliness, to affirm existing relationship bonds (like those with their own mothers), and to find existential meaning and fulfilment in their lives.</p>

The results of the Australian studies indicate that the motives for childbearing in Australia are similar to those in other low fertility, developed, Western countries and overwhelmingly are more psychosocial than economic (Callan 1985: 67, Weston and Parker 2002: 9). In particular, Australians value children for the love, companionship, happiness and fulfilment they provide, and for women a confirmation of their female adult identity.

2.1.3 Conclusion: motives for childbearing are multidimensional

Although existing studies have taken many different theoretical approaches, the motivation for childbearing appears to be multidimensional. Children are viewed as valuable for more than one reason and those reasons may be interrelated (Lalos et al. 1985: 476, Robinson and Stewart 1989: 863, Newton et al. 1992: 25, Edelman et al. 1994: 292, Kohlmann 2002: 2, Dyer et al. 2008: 352). Overall, the evidence suggests that there are three main benefits of children to their parents: the psychological value which is the ability of children to provide positive affect (emotional ties); the social value which is their capacity to provide social status (position in society) and behavioural confirmation (social relationships with 'relevant others', not restricted to just the family or close relatives, includes friends, who give behavioural confirmation when individuals do the 'right thing'); and the economic value of children which is their ability to provide economic security for the family (Kohlmann 2002: 10).

Although children have some value for their parents in all societies, the importance of these values varies between individuals and in different social contexts (Lalos et al. 1985: 476, Robinson and Stewart 1989: 863, Dyer et al. 2008: 352). The economic benefits of having children are greater in developing countries than developed countries because in developing countries children's economic contribution to the family is more important, for example, children provide old age security. While in developed countries children have more psychological value because children are no longer economic assets and are quite costly to raise (Kagitcibasi 1997).

Empirical research suggests that in developed countries such as Australia women derive mainly psychosocial benefits from having children and do not desire children due to their economic utility. Accordingly, the psychosocial benefits of children are

more salient reasons for having children as it does not make economic sense to have children (Kagitcibasi 1997). Children are therefore viewed as a social investment rather than an economic one as they confer parental status and assist in creating a normative family group (Edelmann et al. 1994: 292). The major psychosocial benefits of children identified in the existing literature include conferring adult status and femininity, marital adjustment and satisfaction, social connectedness, social capital, and psychological benefits such as happiness and fulfilment. As Caldwell (1982: 338) commented ‘[couples] will have [two or three children] ... in the full knowledge that having children is not economic, but that one’s own children provide a unique form of pleasure which is not substitutable ...’.

2.2 WOMEN’S CHILDBEARING DESIRES, INTENTIONS AND EXPECTATIONS

Fertility research typically conceptualises childbearing as the outcome of a decision-making process that involves a number of determinants, such as age, fecundity, control over contraception and chance, and a person’s desire or preference for children (Friedman et al. 1994, Heiland et al. 2008: 132). Fertility desires have been regarded as an important dimension of attained fertility especially in developed countries where there is less concern over unintended conception given relatively easy access to safe and effective contraception and abortion (Heiland et al. 2008: 132).

Fertility preferences have been investigated increasingly in developed countries due to the fall in fertility rates to below replacement level. The aim of such investigations has been to gain insight into the determinants of fertility behaviour and the causes of fertility decline (Bracher and Santow 1991, Weston and Qu 2001a: 7, Heiland et al. 2008: 130). Several related concepts have been used to measure fertility preferences: ‘ideals’, ‘desires’, ‘intentions’ and ‘expectations’ (Testa and Grilli 2006: 111). These have been regarded as conceptually important and examined in theories and studies of fertility decision-making due to their role in connecting individual attitudes and circumstances to behaviour (Thomson and Brandreth 1995: 82, Quesnel-Vallée and Morgan 2003: 499, Schoen and Tufis 2003: 1032, Weston et al. 2004, Testa and Grilli 2006: 111).

2.2.1 Women's desire for children

Concern regarding the low fertility rate in countries such as Australia has resulted in a number of investigations into whether or not women want children. The recent Australian Institute of Family Studies' (AIFS) Fertility Decision Making Project (FDMP) was a national random telephone survey of over 3,000 Australian women and men aged 20 to 39 years which investigated the factors which affect individuals' fertility decision-making. It found that most people want to have children and less than ten percent of all childless respondents did not want to have children (Weston et al. 2004). Surveys in other Western countries such as the USA report voluntarily childless rates of around five percent indicating that intended childlessness is uncommon and most people desire children (van Balen and Trimbos-Kemper 1995: 138, Schoen et al. 1997: 350).

2.2.2 Women's child number desires

The number of children desired by individuals, often referred to as child number or family size desires, has been one of the main hypothesised predictors of the actual number of children born (Miller and Pasta 1993: 113). As a result, child number desires are often gathered as part of fertility surveys, even though there are often differences between studies in terms of how the question is framed. Participants are usually asked either about the number of children 'an average family' or a 'family like yours' would desire (that is, societal ideal family size); or what the individual would like for themselves (that is, personal ideal family size) (Morgan 2001: 154, Testa and Grilli 2006).

A number of studies have examined the number of children Australians would ideally like to have. The methods employed and the main findings from studies evaluating Australians' child number desires are summarised in Table 2.6.

Table 2.6 Studies investigating the ideal number of children desired by Australians

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
VandenHeuvel (1991) Australia	To study Australians' perspectives on the ideal number of children in a cross-sectional population based study	N=4,511	Data from the 1989 National Social Science Survey Participants were asked 'what is the ideal number of children for a family to have?'	Less than 2% of participants said either no children or one child was ideal. The most common response was two children (44%), followed by three children (28%), and the next most popular was four children (17%).
Evans & Kelley (1999) Australia	To examine Australians' preferences for family size in a cross-sectional population based study	N=2,100	Australian data from the International Social Science Survey/Australia's 1996/97 Survey Participants were asked 'If you could start your life over how many children would you like to have altogether (regardless of how many you actually have)?' Response options ranged from no children to six children	Very few respondents desired no children. One child families were a little more popular than no children but the majority of respondents regarded two children as ideal. Three children families were also seen as desirable but not as popular as two children families. Four children families were viewed as more ideal than childless or one child families but larger families of five or six children were perceived by the majority of respondents not to be ideal.
Smart (2002) Australia	To investigate the family formation aspirations including desired family size of Australian teenagers in the Australian Temperament Project	N=1,250 Teenagers (aged 17-18 years) from Victorian families	Data from the Australian Temperament Project (a longitudinal study of a representative cohort of Victorian families commenced in 1983) Participants were asked in a mail survey 'how many children would you like to have?'	Almost all the teenagers (94%) desired two or more children. Teenage girls and boys had similar aspirations regarding family size.
Weston et al. (2004) Australia	To examine the ideal number of children of Australian women and men in a cross-sectional population based study	N=3,201 Women and men aged 20-39 years Participants selected through	Data from the Australian Fertility Decision Making Project Participants were asked in a telephone interview 'ideally, how	Two child families were considered the ideal family size followed by three child families. A family of four or more children was more popular than no children or only one child.

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Mitchell & Gray (2007) Australia	To examine the childbearing expectations including the ideal number of children of childless Australians in a longitudinal population based study	random digit dialling (telephone) N=543 Childless men and women (aged 18 to 54 years in 1997 – Wave 1) Households randomly selected from the electronic white pages (telephone directory)	many [children] would you like to have in total (including the ones you already have)? Data from Wave 2 (conducted in 2000) of the Negotiating the Life Course Survey Participants were asked 'how many children would you like to have assuming you could have the number that you would really like to have?'	The average number of children women ideally wanted to have was two or three. The ideal number of children of most participants (64%) was two or more. Less than 5% thought one child was ideal and almost 15% regarded no children as ideal.
Read et al. (2007) Australia	To determine what influences mothers' childbearing decisions and their ideal number of children in a qualitative study	N=15 Mothers with at least one child aged 9 years or less from Central West of New South Wales Recruited through public schools, the local university campus and snowballing	In-depth face to face interviews Participants were asked about their family size preference	Most women wanted two children. Just three wanted to have more than two children and only one mother expressed a preference for one child

The large families common in the ‘baby boom’ years after World War II, when the total fertility rate reached a high of 3.5 babies per woman, are not common today. The number of children desired by women has also decreased. Among women who married during the late 1950s more desired four children than any other number (Bracher and Santow 1991: 37).

Contemporary Australian studies suggest that very small families, of none or one child, and very large families (for example, of five children or more) are not perceived to be the ideal (VandenHeuvel 1991, Evans and Kelley 1999). This is despite the fact that having only one child can provide women with many of the psychosocial benefits of motherhood (Kohlmann 2002, Kippen et al. 2005: 13, Heiland et al. 2008: 133), and many couples actually end up having no children or only one child (VandenHeuvel 1991).

Although there has been a decline in actual fertility to below replacement level and a (slight) downward shift in desired family size from previous times in the last four decades, desired family size in Australia remains close to two to three children, and very few women report wanting fewer than two children (Bracher and Santow 1991: 48).

2.2.2.1 Comparison of Australians’ ideal number of children with that of others

Personal and social ideal family size has been investigated in a number of different countries. Evans and Kelley (1999) used data from the 1991 International Social Survey Programme’s (ISSP) Family Values Survey to compare ideal family size across nations. The ISSP conducts cross-national research in areas of topical interest in social science. The nations included in the Family Values Survey were the Philippines, Russia, Poland, Hungary, Slovenia, the Czech Republic, East Germany, Bulgaria, Ireland, Spain, Israel, New Zealand, Italy, the Netherlands, Austria, Britain, Sweden, Australia, West Germany, Japan, Norway, Canada and the USA. Respondents were asked: ‘All in all, what do you think is the ideal number of children for a family to have?’. Consistent with ideal family size in Australia, the majority of respondents in these countries stated that the ideal number of children is two to three. Smaller families were unpopular. Only one percent thought that it was ideal for a

couple to have no children and very few (four percent) regarded one child families as ideal. It is interesting to note that desired family size is considerably different from actual family size with small families of no or one child quite commonplace in many of these nations (Evans and Kelley 1999).

Data from other studies shows similar trends. Bongaarts (2002: 426) reports that the average number of children desired by women aged 30-34 years for the fifteen countries in the Fertility and Family Surveys undertaken in the UN Economic Commission for Europe region (which includes the USA and Canada) in the early 1990s is very similar, ranging from an average of 2.0 children per woman in Austria and Germany to 2.5 children in Sweden. The desired number of children in this study was calculated by adding the number of children a respondent already has to the additional number wanted over the remainder of her reproductive years. It appears that women on average want about two children in contemporary societies (Bongaarts 2002: 439).

More recently, the Finnish University Student Health Survey conducted in 2004 included items related to students' childbearing including their desired number of children. The majority of students (both male and female) wanted to have children and the average number of desired children was 2.2 (Virtala et al. 2006: 314).

Despite evidence from surveys indicating that desired family size is slightly above two in most developed countries, Goldstein et al. (2003) report evidence from the 2001 Eurobarometer Survey suggesting that the two child ideal may be beginning to change in several European countries. The Eurobarometer Survey is conducted in 15 European Union nations. The 2001 Survey asked two questions regarding fertility ideals reflecting both the respondent's personal ideal family size and that of the respondent's larger society. The two questions asked were: 'Generally speaking, what do you think is the ideal number of children for a family' and 'And for you personally, what would be the ideal number of children you would like to have or would have liked to have had?'. The 2001 Survey found that women of all ages in most countries had an ideal family size of at least two children. However, the average ideal family size in Austria and Germany had fallen below replacement level and younger women (aged 20-34 years) in these countries reported even lower ideal

family sizes of 1 to 2 children (average = 1.7) (Goldstein et al. 2003: 479). Goldstein et al. (2003: 489) concluded that for the next generation declining actual fertility is beginning to have an effect on the normative ideal family size of two children.

The decline of ideal family size to sub-replacement levels for young German and Austrian women has been explained by the fall in the fertility rate after the baby boom which occurred in Germany and Austria earlier than in other European countries. Thus, children born in Germany and Austria during the 1970s would have been socialised in smaller families and would have perceived a family with only one to two children as normal, and might have grown up without any social pressure to have more than one child (Testa and Grilli 2006: 109-110).

There is no broad theoretical framework in the existing literature for the determinants of ideal family size so it is still not clear why individuals may want a given number of children (Testa and Grilli 2006: 110). However, Goldstein et al. (2003) hypothesise that it is likely that through social learning this generation of young Germans and Austrians has taken the actual childbearing behaviour of the previous generation as the standard for their own ideal fertility (Goldstein et al. 2003). Testa and Grilli (2006), using data from the 2001 Eurobarometer Survey, found a similar strong association between young people's reported ideal family size and the fertility behaviours observed in the previous generation. Therefore, understanding young people's preferences for ideal family size may shed light on future fertility levels (Testa and Grilli 2006). Furthermore, if the preference for smaller families spreads to other countries as a result of the persistent experience of low actual fertility, any further recovery of fertility may be compromised and the formulation of family-friendly policies may become more challenging in the future (Testa and Grilli 2006: 132).

2.2.3 Ideal age to have children

The increasing mean age of first birth has been suggested to be one of the major factors contributing to the decline in average family size (Jain and McDonald 1997). The average age that women (who were aged 20 – 39 years at the time of being interviewed) in the Australian Institute of Family Studies' Fertility Decision Making

Project considered to be ideal for starting a family was 26.8 years (Weston et al. 2004). Similarly, close to two-thirds of teenagers in the Australian Temperament Project Study hoped to have their first child between 25 and 29 years of age (Smart 2002). These ages are both below the average age at first birth for all Victorian women which was 29.4 years in 2004 (Victorian Perinatal Data Collection Unit (Victorian Government Department of Human Services) 2005) suggesting that there are factors preventing women from having children at the age they consider ideal.

2.2.4 Women's childbearing intentions and expectations

The decline in fertility rates to below replacement level in most developed countries has prompted population researchers to examine the association between fertility intentions and fertility behaviour as a discrepancy between intended and achieved family size could demonstrate the existence of an 'unmet need' for children (Heiland et al. 2008: 130, Liefbroer 2009). Childbearing intentions have been used to predict the future fertility of cohorts, and to assess an individual's ability to realise their childbearing desires. This provides an insight into fertility decision-making and the factors that impact on individuals' capacity to realise their intentions (Quesnel-Vallée and Morgan 2003: 499, Smallwood and Jefferies 2003: 15).

The terms fertility or childbearing 'intentions' and 'expectations' are often used synonymously (Weston et al. 2004). For example, respondents in Quesnel-Vallée and Morgan's (2003) study which investigated the relationship between intended family size and observed fertility were asked about their fertility intentions with the following question: 'How many (more) children do you expect to have?'. It has been argued that there is no substantive difference between these different wordings especially for respondents of fertility surveys whose stated intentions are often nearly identical to their stated expectations (Westoff and Ryder 1977: 431, Morgan 2001: 154, Hagewen and Morgan 2005: 517).

However, demographers and social scientists such as Weston and Qu (2004: 11) contend that 'expectations' may include consideration of the chances of success in achieving intended outcomes and acknowledge factors beyond an individual's control; whereas intentions refer to planned actions toward a particular goal (Morgan 2001:

153). Thus, it has been suggested that the most accurate measure to predict fertility is the ultimately expected number of children, that is, the sum of the children already born plus the children expected for the future. This is usually asked in fertility surveys as ‘do you expect to have a (another) child? If yes, how many?’ (Testa and Grilli 2006: 111). Another method is to ask people about their perceived likelihood of having a (another) child as is done in the General Household Survey conducted in Great Britain (Testa and Grilli 2006: 111). Recent Australian studies such as the Household, Income and Labour Dynamics in Australia (HILDA) Survey which is a household-based longitudinal survey which began in 2001 and collects data about family dynamics in annual waves (Fisher and Charnock 2003: 7, Yu et al. 2007: 88), and the Negotiating the Life Course Study a longitudinal study which began in 1997 and collects data about women’s and men’s decisions about family formation in three yearly waves (Mitchell and Gray 2007) also use this method of assessment of fertility expectations.

2.2.4.1 Theoretical explanations of childbearing intentions

Social psychologists agree that most human behaviour is goal directed (Ajzen 1985: 11). Actions are controlled by intentions but not all intentions are carried out or realised: some are abandoned altogether while others are revised to fit changing circumstances (Ajzen 1985: 11).

The theory of reasoned action postulates that a person’s intention to perform or not perform a behaviour is the immediate determinant of that action, and people are expected to act in accordance with their intentions (Ajzen 1985: 12). Intentions are influenced by personal attitudes and social pressures or norms (Ajzen 1985: 12). Generally speaking people intend to perform a behaviour when they evaluate it positively and believe that important others think they should perform it (Ajzen 1985: 12).

However, a limitation of the theory of reasoned action is the assumption that when a person forms an intention to act, they will be free to act without limitation. Many factors have been found to influence the stability of behavioural intentions (Ajzen 1985: 18). Intentions may change over time; or as a result of unforeseeable events, or

external or situational factors. Successful performance of the intended behaviour is contingent on the person's control over the various factors that may prevent it (Ajzen 1985: 29). Intentions can only be expected to predict a person's attempt to perform a behaviour rather than its actual performance (Ajzen 1985: 29). The theory of planned behaviour attempts to resolve this limitation. The theory of planned behaviour is an extension of the theory of reasoned action and includes an extra component 'perceived behavioural control', covering behaviours that are under volitional control (Ajzen 1985, Weston et al. 2004).

In Miller's (1994) and Miller and Pasta's (1995) models of fertility decision-making, which are based on the theory of reasoned action (Ajzen and Fishbein 1980), the focus is on 'desires' and 'intentions'. Miller and Pasta argue that fertility decision-making starts with fertility related motivations that shape desires for a child or a certain number of children. Childbearing desires are psychological states that represent what someone wishes for and are influenced primarily by factors internal to the individual such as motivations, attitudes and beliefs. With respect to childbearing, desires can include the desire to have a(nother) child (childbearing desires), the desire for a certain number of children (child number desires), and the desire to have a child at a certain time (child timing desires). Desires do not generally lead directly into action. Instead they are translated into intentions which are psychological states that represent what someone actually plans to do. Intentions are based on desires but take into consideration the perceived desires of significant others and what can actually be achieved given situational constraints. Intentions lead to fertility behaviours. Consequently, in Miller and Pasta's model childbearing behaviour is influenced by intentions.

Therefore, intentions are central to both the theories of Miller and Pasta and Ajzen, and occupy an important role mediating between key background variables (such as attitudes, norms, beliefs and demographics) and childbearing behaviour (Langdridge et al. 2005: 122).

2.2.4.2 Predictive validity of childbearing intentions

A substantive theoretical and empirical literature focuses on the predictive validity of fertility intentions (Hagewen and Morgan 2005: 508). Empirically, fertility intentions have been shown to be powerful predictors of future fertility behaviour. Beckman et al. (1983) using a sample of young couples in the USA found that intentions were a primary mediating factor affecting contraceptive use and fertility. Schoen et al. (1999) examined the relationship between fertility intentions and behaviour using a sample of 2,812 participants from the National Survey of Families and Households (USA). Fertility intentions were found to be strong and persistent predictors of fertility behaviours. Also using data from the National Survey of Families and Households, Remez (2000) investigated the association between childbearing intentions and actual childbearing outcomes. An individual's intention to have a child accurately predicted whether or not they would do so, and the relationship was strong and significant even when other life course variables were controlled for.

Nevertheless, although a number of studies show that intentions are related to actual fertility, these same studies indicate a more complicated process (Morgan 2001: 156). Specifically, the predictive power of fertility intentions appears to be greater the more certain the intention, and the more specific and proximate the intended timing (Schoen and Tufis 2003: 1032, Bühler 2008: 578). Furthermore, strong intentions not to have a child are more likely to be realised than strong intentions to have a child (Rovi 1994: 346, Schoen et al. 1999). Also, positive intentions are more likely to be changed to negative ones than vice versa (Rovi 1994: 346), and family size preferences are more likely to be revised downwards than upwards (Westoff and Ryder 1977: 449, Qu and Weston 2004: 20). Therefore, at present the general consensus is that intentions are not a consistently accurate predictor of individual or aggregate completed fertility (Morgan 2001, Quesnel-Vallée and Morgan 2003: 499, Hagewen and Morgan 2005: 508).

As a result, it has been argued that caution must be exercised when using childbearing intentions to project future fertility behaviour (Clay and Zuiches 1980: 264). A number of explanations have been suggested (Goldstein et al. 2003: 480). First, the standard operationalisation of fertility intentions has no time referent and there is an

absence of contextual referents (Morgan 2001: 154). People are often unable to predict their future fertility and the conditions which will make childbearing favourable or not favourable (Westoff and Ryder 1977: 449, Van Peer 2000: 3, Goldstein et al. 2003: 480, Berrington 2004: 11). The competing demands of paid employment and children, relationship breakdown and disagreement among partners, as well as fertility difficulties due to delaying having children, may mean that some people do not have as many children as they ideally want (Townes et al. 1980: 211, De Vaus 2002: 20, Quesnel-Vallée and Morgan 2003: 521, Sobotka 2009). Reasons for people revising their childbearing aspirations downward and upward are often related to the same broad concerns about financial and employment circumstances, and relationship status. Problems in these areas are regarded as constraints which lead to a downward revision while improved circumstances result in an upwards revision (Qu and Weston 2004: 22). Accordingly, people may revise their expressed childbearing preferences based on the reality of their evolving circumstances (Van Peer 2000: 4, Weston and Qu 2001a, Merlo and McDonald 2002: 1, Fisher and Charnock 2003, Berrington 2004: 18, Carmichael and Whittaker 2007, Mitchell and Gray 2007: 27).

Second, preferences often change over the life cycle with a tendency for women to revise their intended family size downwards as they age (Quesnel-Vallée and Morgan 2003, Smallwood and Jefferies 2003: 22, Berrington 2004: 18, Régnier-Loilier 2006, Testa and Grilli 2006, Heiland et al. 2008, Liefbroer 2009, Sobotka 2009). For example, Australian women tend to have relatively high fertility aspirations when they are in their early twenties, expressing preferences for numbers of children that are on average above replacement level, but in their thirties these aspirations are modified downwards as they face the realities of their lives (McDonald 1998: 4, McDonald 2000b).

Third, fertility intentions may differ at different parities because conditions may change after each birth. Although most couples begin family formation with an idea of how many children they will have, children are usually born one at a time (Morgan 1982: 316). Thus, the experience of childbearing and parenthood may modify fertility intentions (Morgan 2001: 154, Smallwood and Jefferies 2003: 22, Régnier-Loilier

2006: 190). Furthermore, standard fertility intention questions do not always incorporate other factors that respondents might anticipate such as sex preferences for children (Morgan 2001: 155). For example, a couple may intend to have two children, then have a son but desire a daughter. If their next child is another son then they may revise their intentions and have a third child.

Fourth, fertility ideals reported in surveys may simply be a reflection of societal norms. Researchers have long recognised the possibility that family size cultural norms play a role in fertility desires and attainment (Heiland et al. 2008: 134). Westoff and Ryder (1977: 442) found that the women in their study whose fertility intentions corresponded with the majority of the group to which they were a member (Catholic or non Catholic) were more likely to be certain about their intentions and unlikely to change their intentions. They concluded that women's intentions are dependent upon individual preferences as well as the preferences of a woman's reference group. Quesnel-Vallée and Morgan (2003) also found that intentions and behaviour were most likely to correspond when normative intentions were stated. Evidence (for example, Goldstein et al. 2003) is emerging that if very low fertility is sustained for a long period of time, ideal preferences can move away from childbearing (Hagewen and Morgan 2005: 507, McDonald 2006: 486). The increasing acceptance of non traditional lifestyles such as voluntary childlessness may also influence fertility preferences (Heiland et al. 2008: 134).

2.2.5 Summary: disparities between fertility preferences and outcomes

Comparisons of childbearing desires, intentions and expectations, and actual childbearing outcomes can shed light on childbearing behaviour (Bracher and Santow 1991: 34, Bongaarts 2002: 426). Australian women consistently respond to surveys stating that ideally on average they would like to have two or three children. The childbearing desires and expectations of the participants in the Australian Institute of Family Studies' Fertility Decision Making Project were consistent with the current 'two child family' norm (Weston et al. 2004). Nevertheless, data from the Household, Income and Labour Dynamics (HILDA) Survey also shows that many Australians'

desire to have (more) children is greater than their expectation of having them in the future (Fisher and Charnock 2003: 3).

Therefore, although most women want to have children (Smallwood and Jefferies 2003: 25, Weston et al. 2004), there appears to be a gap between women's ideal number of children and the number of children they will actually have with many women having fewer children than they desire (Barnes 2001: 19, Weston and Qu 2001a, Quesnel-Vallée and Morgan 2003, Voas 2003: 627, Weston and Qu 2004, Hagewen and Morgan 2005: 510, Read et al. 2007).

This divergence between fertility preferences and actual fertility suggests that childbearing desires are not always strong predictors of fertility outcomes, and many women will not achieve their childbearing desires. So while fertility preferences are central to understanding levels of fertility and women's attitudes to future childbearing it appears they do not completely determine these levels (Smallwood and Jefferies 2003: 22, Hagewen and Morgan 2005: 522).

Women's inability to achieve their fertility desires appears to play a significant role in contemporary low fertility (Barnes 2001: v, Quesnel-Vallée and Morgan 2003: 497), and it seems likely that below replacement level fertility in many countries would disappear if individuals' fertility preferences were realised (Hagewen and Morgan 2005: 507).

This raises questions about why there are discrepancies between the number of children women desire and the number they actually have; why many women do not achieve their fertility preferences; what factors are salient in women's childbearing outcomes, their relative importance and if any are barriers preventing women from achieving their fertility desires; and if low fertility is an unintended rather than a deliberate outcome of women's childbearing behaviour.

CHAPTER 3

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3 WOMEN'S CHILDBEARING OUTCOMES

Many developed Western countries such as Australia are experiencing below replacement level fertility rates (Australian Bureau of Statistics 2008c). As a result of the public debate and concern regarding the social and economic consequences of low fertility, several empirical investigations into the factors which are salient in women's childbearing outcomes, that is, the number of children they actually have, have been conducted in Australia and other developed Western countries including the UK, USA, Germany, Sweden and Finland. A number of theoretical explanations of low fertility and fertility decision-making have also been proposed.

3.1 EXPLANATIONS OF WOMEN'S CHILDBEARING OUTCOMES

3.1.1 Theoretical explanations of fertility decision-making

A range of theoretical explanations have been suggested in order to enhance understanding of the process of fertility decision-making and fertility behaviour in low fertility populations. These include the prominent 'rational choice' theories which take a cost benefit approach, and other theoretical perspectives which place more emphasis on social and psychological variables.

3.1.1.1 Rational choice or cost benefit theories

Determinants of childbearing outcomes identified in empirical studies, including Weston et al. (2004), White and Kim (1987), and Fisher and Charnock (2003), conducted in low fertility countries and theoretical explanations of low fertility typically stress the 'costs' to women of having children. Fertility decision-making is viewed as a rational process which involves assessing the costs (both direct and indirect) and benefits of having children, and evaluating the potential rewards of children relative to other goals which may be pursued (Neal and Groat 1980: 222, Radecki and Beckman 1992: 158). The assumption is usually made that if the costs of a(nother) child outweigh the benefits the individual will choose not to have a child, however, if the benefits outweigh the costs a child will be desired (Beckman et al. 1983: 520).

Several theoretical models which take a rational or cost benefit approach of fertility decision-making have been proposed. McDonald (2000b, 2002c) has categorised these into four main theoretical perspectives: rational choice, risk aversion, post-materialist values, and gender equity.

The 'rational choice' perspective states that the decision to have a child is an outcome of a cost benefit analysis. When deciding to have a child, people make the considered calculation that the benefits of having a child outweigh the 'costs' (McDonald 2000b: 11). These costs are mainly financial and include the cost of raising children and lost earnings from having to care for a child. However, according to this perspective there are no financial benefits in having a child, only psychological ones, and these vary according to the birth order of the child. For example, the first child provides benefits such as the status of being a parent and carrying on the family name while the decision to have a second child is related to the notion that each child should have at least one sibling or a desire for a child of the opposite sex (McDonald 2002c: 422).

In contrast to the rational choice perspective which assumes that people are aware of the costs and benefits of having children, the 'risk aversion' perspective maintains that it is uncertainties regarding potential future costs of having children which influence childbearing decisions (McDonald 2000b: 14). For example, concerns about future job security may deter people from having a child due to potential loss of income and their perceived inability to meet the financial costs of children.

The 'post-materialist values' theory argues that people are increasingly concerned with values such as self-realisation, autonomy and freedom, and these are incompatible with having children (McDonald 2000b: 16). Explanations of the low fertility rate which portray women as 'selfish' because they have 'chosen' lifestyle factors such as their freedom over having children are consistent with this theory (Weston et al. 2004: 14).

The 'gender equity' theory focuses on the difference in women's opportunities relative to men's opportunities before and after they have a child. McDonald (2000b) argues that in countries where educational and work opportunities for women are diminished when they have a child, women will have fewer children than they would

otherwise. For example, a lack of ‘family friendly’ work policies and high child care costs operate as disincentives to women in having children.

Limitations of rational choice or cost benefit theories

However, as argued by Van Peer (2000: 5) such ‘rational choice’ theories are not sufficient to understand reproductive behaviour fully. One shortcoming is that although calculating the ‘costs’ of children may help explain why women do not have children, it contributes very little to understanding why women do have children (Friedman et al. 1994, Schoen et al. 1997: 334), and even in low fertility countries such as Australia most women have children and only a small minority remain voluntarily childless (Weston et al. 2004). Also such theories do not explain why people desire children in the first place (Friedman et al. 1996: 137). It has been argued that without specifying the potential benefits of having children any explanation of fertility is incomplete (Friedman et al. 1994: 376, Hechter et al. 2005: 91, Nauck 2007: 616).

Another limitation of the rational choice or cost benefit approach is that it is based largely on the individual and not the couple (Beckman et al. 1983: 520, Neal et al. 1989: 315). However, as will be discussed in Section 3.2.5.2, research has shown that partner’s preferences are also important in childbearing desires and outcomes (Morgan 1985: 125, Thomson et al. 1990: 586, Thomson 1997: 351, Thomson and Hoem 1998: 322, Fisher and Charnock 2003: 5, Maher et al. 2004: 26).

Furthermore, rational choice theories assume that childbearing behaviour is a rational voluntary process. Yet, as Neal and Groat (1980: 223) have argued, ‘there are apparent in the fertility behaviours of many couples numerous examples of fertility related outcomes which are largely divorced from deliberate decision making in any formal sense at all’. For example, unplanned pregnancies are not explained by rational choice theories. It is estimated a third to a half of all pregnancies in Australia are unintended (Maher et al. 2004, England et al. 2008, Marie Stopes International 2008, Weisberg et al. 2008). Instead of formulating a set of plans regarding the number and spacing of children and seeking to implement them, many couples may actually be directed toward adjusting and coping with the reality of their circumstances and future

prospects when considering childbearing (Neal and Groat 1980: 234, Van Peer 2000: 5).

Uncertainty reduction theory

Friedman et al. (1994) developed an alternative rational choice theory of fertility, the uncertainty reduction theory, in order to address the value of children to couples and other limitations inherent in rational choice theories. The uncertainty reduction theory aims to explain why people in developed countries continue to have children when children represent a net economic cost to their parents. The uncertainty reduction theory focuses on 'immanent' values, that is, ends that are desired purely for their own sake, instead of 'instrumental' values which provide means to a variety of ends and are usually at the core of rational choice theories of fertility.

The uncertainty reduction theory of parenthood is a two-stage theory which is based on the assumption that rational actors will always seek to reduce uncertainty, and a subsidiary assumption of marital solidarity. Consequently, individuals seek parenthood as a way of reducing uncertainty in their lives, and couples do so as a strategy to reduce uncertainty in their lives and marriage. Thus, the value partnered parents derive from children is an increase in marital solidarity which in turn decreases marital uncertainty (Myers 1997: 1273).

Friedman et al. (1994) argue that the theory applies to women acting alone or couples making joint decisions or for men who control fertility decisions. Furthermore, Friedman et al. (1994: 383) contend that the impetus for parenthood is greatest among those whose alternative pathways for reducing uncertainty are limited or blocked. For example, minority young women, such as poor young African-American women, may be motivated to have children mainly because of their inability to use stable careers or marriage as uncertainty reducing strategies.

However, the uncertainty reduction theory refers explicitly to the movement from childlessness to parenthood. Myers (1997) applied the uncertainty reduction theory to high order births using a US national probability sample of married adults, and found little support for the uncertainty reduction theory. In contrast to Friedman et al. (1994), Myers (1997) found that a solid marriage and compatibility between spouses

encouraged parenthood and higher-order childbearing. Myers (1997: 1287) concluded that one theory of fertility did not appear to be adequate by itself, as decisions regarding childbearing are dynamic and consequently, 'single-minded theories' such as uncertainty reduction may not capture the complexity involved.

3.1.1.2 Social and psychological theories of fertility

The role of other variables of possible importance such as values, attitudes and social norms are rarely considered in rational choice theories. Emotional, social or psychological factors may be even more important than rational or economic factors in reproductive behaviour (Van Peer 2000: 5), and attitudes and beliefs may interfere with the full realisation of rational decision-making (Neal and Groat 1980: 223). Theoretical explanations of fertility behaviour which have incorporated psychosocial factors include Hakim's (2003b) preference theory, and Miller's (1994) and Miller and Pasta's (1995) theories of fertility decision-making.

Hakim's preference theory

Hakim's (2003b) preference theory is a sociological theory which regards lifestyle preferences and values as the principal determinants of women's fertility choices and outcomes. Based on her reviews of recent research evidence, Hakim argues that three different types of women are identifiable in terms of their enduring work-family preferences in modern industrialised societies such as the USA and Western European countries. These are: 'home centred' women who regard family life and children as the main priorities in life and therefore choose not to be employed unless financially necessary (about 20 percent of all women); 'work-centred' women who value a life devoted to paid employment and frequently remain childless (about 20 percent of all women); and 'adaptive' women who have no prevailing preference and want to combine paid employment and family (about 60 percent of all women).

Hakim (2003b) argues that these preferences are the primary determinants of fertility and employment behaviour. However, preference theory has been criticised in terms of the implied causal link between heterogeneous preferences and heterogeneous behaviour. It has been argued that preferences do not explain the causation of behaviour but just shape and influence choices (Vitali et al. 2009). McRae (2003) has

argued that women do not have genuine, unconstrained choices about how they wish to live their lives, and preference theory does not sufficiently take into account the fact that situational, structural and normative constraints might influence women's choices.

It has also been suggested that the heterogeneity in preferences could be broader than the three categories proposed by Hakim (Aassve et al. 2007). Nevertheless, Vitali et al. (2009) investigated the link between women's lifestyle preferences and fertility intentions and outcomes using comparative data from the 2004/2005 European Social Survey for 11 Western European countries: Austria, Germany, Switzerland, Great Britain, Ireland, Spain, Portugal, Greece, Sweden, Denmark and Norway. The Survey collected data on women's actual and intended (plans to have a child in the next three years) fertility, and their preferences regarding the combination of paid employment and family. Vitali et al.'s (2009) analyses were restricted to a subsample of female respondents aged 45 years or less. Their results provide evidence that preference theory is able to identify three different categories of women according to their lifestyle preferences in a range of European countries. Yet, although their results confirmed an association between preferences and actual fertility for some countries no support for the association between preferences and fertility intentions was found. Thus, the direction of effect of preferences on behaviour is unknown.

Miller and Pasta's theory of fertility decision-making

As previously discussed in Section 2.2.4.1, Miller's (1994) and Miller and Pasta's (1995) theoretical framework of fertility decision-making, which is based on the theory of reasoned action (Ajzen and Fishbein 1980) a psychological theory of the link between attitudes and human behaviour, incorporates and integrates many of the factors that previous theoretical perspectives (such as rational choice theories) have recognised as well as including an attitudinal component and acknowledging social-normative influences. Miller and Pasta argue that attitudes, including those toward women and motherhood, which are more or less compatible with having children, will affect childbearing desires and behaviour.

There are four steps in Miller and Pasta's theory of fertility decision-making: the formation of traits, the activation of traits to form desires, the translation of desires into intentions, and the implementation of intentions in the form of behaviour.

However, Weston et al. (2004) argue that fertility decision-making is more complex than indicated by the models of Miller and Pasta, and Ajzen and in particular, argue that childbearing preferences as well as intentions are also likely to be affected by perceived constraints. For example, the experience of having a first child provides important insights into the rewards and difficulties of parenthood and may result in modification of family size desires (Weston and Qu 2004: 11).

3.1.2 Demographic explanations of childbearing outcomes

Explanations for the low fertility rate and the factors important in Australian women's childbearing outcomes are often inferred from changes observed in nationally collected population data such as Census data and other data collected by the Australian Bureau of Statistics (for example, Jain and McDonald 1997, Kippen 2006). This work is often focused on the sociodemographic variables thought to influence fertility such as age, ethnicity, social class, income and marital status (Schoen et al. 1999, Langdridge et al. 2005: 121).

Although such demographic investigations allow for the examination of whole populations and are able to identify the patterns in women's childbearing behaviour at a population level (that is, the 'what' – for example, the numbers of births, and which women have children and when), they cannot consider women's individual decisions or lived experiences (in particular, the 'why' – that is, which factors contribute to women's childbearing outcomes) (Rovi 1994: 344). Furthermore, demographic investigations do not usually consider differences in psychological or attitudinal variables at the individual level (Beckman et al. 1983).

3.1.3 Women's individual childbearing outcomes

There have been a number of recent studies which have collected data from women themselves regarding their childbearing behaviour. In Australia these studies include large population based studies such as the Australian Institute of Family Studies' Fertility Decision Making Project (Weston et al. 2004); various investigations of

fertility using data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Melbourne Institute of Applied Economic and Social Research 2004); and smaller qualitative studies such as the Australian Family Formation Decisions (AFFD) Project (Australian Demographic and Social Research Institute 2009a), and the Families, Fertility and the Future: Hearing the Voices of Australians Study (Maher et al. 2004). Most of these investigations were conducted at the same time, or just prior, to this study (which collected data in 2005).

3.1.3.1 Recent Australian studies

Australian Institute of Family Studies' Fertility Decision Making Project

The Australian Institute of Family Studies (AIFS) is an Australian Government statutory agency whose role is to conduct research about a broad range of issues affecting families in Australia (Australian Institute of Family Studies 2009). In 2004, the AIFS, in collaboration with the Australian Government Office for Women, conducted the Fertility Decision Making Project (FDMP) (Weston et al. 2004) which was a national random telephone survey of over 3,000 Australian women and men aged 20 to 39 years. The Project investigated the factors which affect individuals' fertility decision-making including the capacity to support a child financially and relationship uncertainty. The sample included parents and nonparents, and women in the sample were generally representative of the general population in terms of the number of children they already had.

Emphasis was placed in the survey of evaluating the costs (including both financial and psychological ones) that may deter couples from having children, and the four 'rational choice' perspectives outlined by McDonald (2000b, 2002c) were discussed. However, participants identified that a variety of factors not just the costs of having children were important in their childbearing outcomes. Nevertheless, no refinement of these theoretical approaches has yet been made as a result of the findings of the study.

The study was important in investigating a wide range of factors likely to be important in the childbearing outcomes of a large population based sample of both women and men. Although a wide range of factors and their relative importance were

examined, there are other factors of possible importance that were not systematically addressed including education debts and health status. Furthermore, although differences by parental status were examined no analysis by parity has yet been reported.

Household, Income and Labour Dynamics in Australia (HILDA) Survey

Several researchers (for example, Fisher and Charnock 2003, Risse 2006, Yu et al. 2007, Marks 2009) have used data from the Household, Income and Labour Dynamics (HILDA) Survey (Melbourne Institute of Applied Economic and Social Research 2004) to investigate the relationship between certain variables and childbearing behaviour. The HILDA Survey was initiated, and is funded, by the Australian Government through the Department of Families, Housing, Community Services and Indigenous Affairs. Responsibility for the design and management of the survey rests with the Melbourne Institute of Applied Economic and Social Research at the University of Melbourne.

The HILDA Survey is a household-based longitudinal survey which began in 2001 and collects data about family dynamics in annual waves. Households were selected using a probability sampling method of households from approximately 500 different areas (Census collection districts) of Australia. The Wave 1 panel consisted of 7,682 households and 19,914 individuals. Structured interviews (face-to-face or telephone) are conducted annually with all adult members of each household.

No existing theory of fertility decision-making or low fertility was specifically mentioned or tested in the HILDA Survey. Nevertheless, studies which have used HILDA data to investigate childbearing behaviour have predominately taken a cost benefit (rational choice) approach. For example, Fisher and Charnock (2003) discuss gender equity and risk aversion theories (both of which take a cost benefit perspective) in their investigation of the relationship between partnering formation and stability and childbearing expectations and outcomes.

The HILDA Survey allows the examination of fertility in a large sample over time, including analysis by parity. A number of studies have used HILDA data to examine the factors which are related to childbearing desires, outcomes and expectations.

However, to date, most of these have focused on the contribution of a single factor to women's childbearing behaviour including relationship stability and formation (Fisher and Charnock 2003), education debts (Yu et al. 2007, Marks 2009), and the provision of paid maternity leave (Risse 2006). As a result, even though a number of factors have been identified as salient in childbearing behaviour, little is known about their relative importance.

Negotiating the Life Course Survey

The Negotiating the Life Course Survey (NLCS) (Australian Demographic and Social Research Institute 2009b) is a longitudinal study undertaken by the Australian Demographic and Social Research Institute, Australian National University and the School of Social Science, University of Queensland. The Negotiating the Life Course Survey began in 1997. The study has collected data about how Australian women and men balance their work, wealth, family, health and education. Data were collected by structured telephone interviews in waves every three years. The sample of over 2,200 individuals is a cross-section of the Australian population. Households were randomly selected using the electronic White Pages (telephone directory). Participants were aged between 18 and 54 years in Wave 1.

No existing theory of fertility decision-making or low fertility was specifically mentioned in the design of the NLC Survey. However, analyses using NLCS data have utilised a variety of theoretical approaches. For example, Gray and Evans (2005) used a 'value of children' approach in order to understand an individual's fertility motivations in particular the relationship between the sex of existing children and parity progression. Whilst for Mitchell and Gray (2007) both risk aversion (cost benefit) and attitudinal (psychosocial) theoretical perspectives were important in their analysis of fertility expectations in childless individuals.

The NLCS provides a valuable dataset which includes details of major demographic events such as the dates of birth of all children born to participants. The NLCS has also investigated a range of reasons that had or were likely to contribute to individuals having or not having children including partner concerns, the cost of raising children, and career considerations. However, a limitation of the NLCS is that the relative

importance of the factors identified as contributing to childbearing outcomes was not assessed.

Australian Family Formation Decisions Project

The Australian Family Formation Decisions (AFFD) Project (Australian Demographic and Social Research Institute 2009a) is a sub-study of selected participants from the Negotiating the Life Course Study (Australian Demographic and Social Research Institute 2009b). The Australian Family Formation Decisions Project aimed to enhance understanding of the historically low and declining level of fertility in Australia. In-depth interviews were conducted in 2002-2003 with 115 randomly selected NLCS respondents resident in the eastern states of Australia. Participants included a mixture of partnered and unpartnered women aged 23-39 years, partnered men with partners aged 23-39 years, unpartnered men aged 23-44 years, and couples in which the female is aged 23-39 years. A few women aged 40-44 years (some with their partners) who the NLCS data show to be childless or to have begun childbearing when aged in their late thirties were also targeted.

No existing theory of fertility decision-making or low fertility was specifically mentioned in the design of, or tested in, the AFFD Project. Furthermore, Carmichael and Whittaker (2007: 113) in their qualitative study of childlessness using data derived from the AFFD Project stated that their research was exploratory, and as such concerned with generating explanations of childbearing behaviour rather than testing existing ones. They concluded that their findings indicate that existing models of fertility decision-making may need revision given the range of biological, psychosocial and economic factors they found to be salient in childbearing behaviour.

The AFFD Project was important in conducting an in-depth analysis of fertility matters, and providing further insights to the data captured by the NLCS. However, the small sample size and selection of participants from only the eastern states of Australia may limit the ability to generalise the results, as the participants are unlikely to be representative of the general Australian population.

Families, Fertility and the Future: Hearing the Voices of Australians

The Families, Fertility and the Future: Hearing the Voices of Australians study (Maher et al. 2004) was conducted in 2002 and 2003 by the School of Political and Social Inquiry at Monash University. The aim of the study was to examine how women and men determine whether or not to have children, and understand how factors such as public policies inform these decisions. Qualitative interviews (face-to-face or telephone) were conducted with 114 parents and childless women (58 mothers and 42 childless women; women aged 21-52 years) and men (n=14) from Victoria. Participants were recruited through a variety of strategies including advertisements regarding the study placed in the community (for example, in public libraries and community health centres in five different local government areas of Victoria) and the media (local newspapers and radio), and snowballing.

The qualitative design of the study allowed an in-depth analysis of the factors investigated. However, although the sample was a 'diverse' group of women (Maher and Dever 2004: 15) including women of different parities, it is difficult to determine if the sample is representative of women in the general population due to the small sample size and the reporting of only broad details of the participants' sociodemographic characteristics. This may limit the ability to generalise the results of the study.

The focus of the study was on the contribution of 'family friendly' policies and initiatives (those which assist individuals to balance their paid employment and family roles including access to maternity leave and part-time work) to women's childbearing behaviour. Therefore, as the contribution of other factors was not assessed it is difficult to determine the relative importance of these factors in women's childbearing outcomes.

Two theoretical approaches of fertility decision-making and low fertility were relevant to the aims of this study and tested: how individuals assess the costs and benefits of having children (the rational choice approach), and the way various social and cultural factors influence individual decision-making (Hakim's preference theory). In contrast to Hakim (2003a), social attitudes were identified as important in

women's childbearing desires and outcomes (Maher and Dever 2004: 15). The authors also concluded that cost benefit explanations of women's childbearing decisions are too simplistic, and their findings suggest that 'far more nuanced explanatory frameworks' are required (Maher and Dever 2004: 16). Nevertheless, no alternative theoretical framework was proposed.

Findings from these recent Australian studies will be further discussed in the following sections.

3.2 PSYCHOSOCIAL FACTORS AND WOMEN'S CHILDBEARING OUTCOMES

Financial and employment factors are popularly regarded as the prime influences on childbearing outcomes in low fertility, developed countries such as Australia (Weston 2004, Newman 2008). Much of the recent public debate and media attention on Australia's low fertility rate has focused on why some women 'choose' not to have children (Maher et al. 2004: 19), and frequently assumes that childless women have chosen between having babies or a career or a certain lifestyle (for example, Wynhausen 2000, Marris 2002) with the implication that such women are responsible for the nation's low fertility rate and that fertility patterns reflect women's active choices or planning around reproduction (Maher and Dever 2004).

Empirical investigations into the factors which determine Australian women's childbearing outcomes tend to focus on the role of a limited number of demographic factors such as women's level of education, labour force participation, marital status and age, and the costs of children (Jain and McDonald 1997, McDonald 1998, Qu et al. 2000, Weston and Qu 2001a, De Vaus 2002, Weston et al. 2004). Yet fertility behaviour is likely to be governed by a wide range of factors (Weston 2004).

Other factors of possible importance in women's childbearing outcomes may include the role of attitudes toward women and motherhood; other psychosocial factors such as the influence of women's partners and significant others, concerns about population size, women's education debts, the accessibility of good quality and

affordable child care, housing conditions, and parity (that is, whether the factors which contribute to women's childbearing outcomes vary for each child they have).

3.2.1 Attitudes toward women and motherhood

Attitudes regarding the appropriate roles and behaviour for women and attitudes toward motherhood can be viewed along a continuum ranging from 'traditional' to 'egalitarian'. People who hold traditional attitudes are likely to consider that women and men have distinct and unique roles within and outside the domestic sphere. In these, motherhood and family caretaking responsibilities are regarded as central to a woman's life and identity, and take precedence over her potential occupational or professional aspirations. At the other end of the continuum, women and men with egalitarian attitudes advocate equality of the sexes, value women's individual autonomy and achievements in addition to their caretaking capacity, and regard motherhood as a part rather than the whole of a woman's adult identity (Dreyer et al. 1981: 174, Kaufman 2000: 131, Konrad and Harris 2002, Barry and Beitel 2006: 512).

Attitudes toward women and motherhood have been shown to be associated with certain sociodemographic variables. Women with post secondary school qualifications generally hold more egalitarian attitudes than women who do not have a post secondary school qualification (Scott and Morgan 1983: 912, Callan 1985: 150, Brewster and Padavic 2000). Education is related to attitudes toward women and motherhood as associated experiences tend to develop and enhance the feasibility of alternative roles for women (Scott and Morgan 1983: 903).

Most religions are strongly family oriented. Women who are affiliated with a religious group are more likely than those who are not to believe that there are only limited alternatives to motherhood for women (Scott and Morgan 1983: 903) and consequently, tend to have more traditional attitudes toward women and motherhood than women who are not affiliated with a religious group (Hare-Mustin et al. 1983: 645, Scott and Morgan 1983: 913).

Miller (1994) and Miller and Pasta's (1995) theoretical frameworks of fertility decision-making incorporate and acknowledge the role of attitudes in childbearing

behaviour. Miller (1994) argues that attitudes, including attitudes toward women and motherhood, which are more or less compatible with having children will affect the strength of childbearing desires and childbearing itself.

The methods employed and the main findings from studies investigating the role of attitudes toward women and motherhood in women's childbearing desires and outcomes are summarised in Table 3.1.

Table 3.1 Studies investigating the relationship between attitudes toward women and motherhood and women's childbearing desires and outcomes

Author(s) and country	Aim of Study and Research Design	Sample	Method	Relevant Findings
Feldman (1981) USA	To compare intentional parents and intentionally childless couples	N=42 parent couples N=37 childless couples Sub group of larger sample for another study Parents recruited from an antenatal class Childless couples recruited from a support organisation for childless couples (National Alliance of Optional Parenthood)	Study specific questionnaire 2 measures of sex role attitudes	Parents were significantly more likely to have traditional attitudes towards women than childless couples.
Scott (1983) USA	To examine the factors affecting traditional family expectations, perceptions of ideal fertility and the perceived cost of having children in a cross-sectional study	N=401 Random representative urban sample Women and men, included parents and childless people Recruited from Polk Directory (database of names and telephone numbers)	9 item study specific scale constructed to measure sex role traditionalism	A significant relationship existed between sex role orientation and the number of children thought to be ideal. Participants with more traditional sex role beliefs regarded a larger number of children as ideal.
Baber (1986) USA	To explore psychosocial aspects (gender role orientation, egalitarianism and career commitment) of fertility decisions in individuals who become parents for the first time after age 30	N=74 40 women (half child free, half expecting first child) 34 husbands Aged 30-38 years Infertile excluded	Semi-structured interviews Self administered demographic questionnaire Feminine Interest Questionnaire (Miller 1980)	Groups' gender role orientation scores were skewed towards the egalitarian end of the range of possible scores. The expectant individuals had significantly more traditional gender role orientations than the childfree women.

Author(s) and country	Aim of Study and Research Design	Sample	Method	Relevant Findings
	and their peers who choose to remain child free	No significant differences demographically between the expectant and childfree groups Recruited from doctors' offices or snowballing		
Morgan & Waite (1987) USA	To examine the relationship between parenthood and sex role attitudes and aspirations	N=20,000 Women and men Aged 22-25 years NLS - Students were randomly selected from 1,200 high schools	Data from the National Longitudinal Study (NLS) of the High School Class of 1972 Scale of sex role attitudes created	Parents had significantly more traditional attitudes than non-parents.
Nock (1987) USA	To investigate if decisions about fertility reflect a woman's view about the role of women in society in a cross-sectional study	N=430 Women aged 18-45 years Data from 1985 National Opinion Research Center (NORC) General Survey National area which uses a probability sample of non-institutionalised adults	Questionnaire Scale to measure women's traditionalism taken from 3 items in 1985 NORC General Survey	Women with very traditional views had more children and reported larger numbers of children as ideal.
White & Kim (1987) USA	To test whether determinants (including sex role traditionalism) of fertility choices vary by parity	N=1,020 Husbands and wives Aged < 55 years Nationwide survey Participants recruited through random digit dialling	Panel data from telephone interviews (3 years apart) Sex role traditionalism measured by summation of 7 Likert type items	Women with traditional sex role orientation were more likely to have a child. However, traditional sex role values appear to encourage only the first child. The authors concluded that traditional sex role values encourage women to become mothers but they do not encourage large families.
Seccombe (1991)	To investigate the perceptions held by	N=409 women N=412 men	Data from 1988 National Survey of Families and	Childfree males more pronatalist than females. Husbands rated the importance of having children

Author(s) and country	Aim of Study and Research Design	Sample	Method	Relevant Findings
USA	childfree married men and women, who are in their childbearing years, of the costs and benefits of having children	Childfree and married men and women 19 years and older National Survey of Families and Households is a longitudinal survey, participants were randomly selected from cross-section of US households	Households Gender role attitudes measured by 2 items: 1. 'It is much better for everyone if the man earns the main living and the woman takes care of the home and family' 2. 'Preschool children are likely to suffer if their mother is employed'. Interview	higher than wives and were more apt to want children themselves. Women's socioeconomic status and gender role attitudes did not influence their perceptions of the costs and benefits of children.
Kaufman (2000) USA	To study the effect of gender role attitudes on family formation and dissolution	N=2,621 Childless women and men in their childbearing years women aged 40 years or less representative sample Longitudinal data from the National Survey of Families and Households	Gender role attitudes measured by two questions: 1. 'It is much better for everyone if the man earns the main living and the woman takes care of the home and family'. 2. 'If a husband and a wife both work full-time, they should share household tasks equally'. Interview	Egalitarian women intended to have and had fewer children than traditional women.
Moors (2003) Netherlands	To examine the relationship between gender role attitudes and family formation among women in early adulthood.	N=1,315 Women – early adulthood (18-30 years) Panel data from a university project. Two waves (2 years apart) Women randomly selected	Interview Attitudinal scale: 4 parts 1. personal autonomy 2. traditional opinion about marriage 3. orientation toward household role 4. value of children	'Emancipatory' attitudes decrease the likelihood of motherhood and this relationship is reversed when women favour traditional family attitudes.

Author(s) and country	Aim of Study and Research Design	Sample	Method	Relevant Findings
Mitchell & Gray (2007) Australia	To examine the contribution of a range of attitudes (including attitudes to motherhood and giving up work/roles of women i.e. gender role attitudes) and aspirations to fertility expectations	N=742 Childless respondents aged from Wave 1 (1997) of the Negotiating the Life Course Study Participants randomly selected from an electronic telephone directory	Interviews Gender role attitudes measured by responses to a number of statements re motherhood and giving up work for women	Childless respondents with less traditional gender role attitudes significantly less likely to expect to have children in the future than respondents with more traditional attitudes.

Nock (1987: 384) argues that women's childbearing desires and outcomes are influenced by, and reflect, their view of the role of women. Scott and Morgan (1983) tested the proposition that attitudes toward the appropriate roles for women are able to explain fertility desires. They surveyed 401 women and men from Oklahoma City in the United States of America (USA) and found a significant relationship between a traditional view of a woman's role and a desire for a large number of children. Kaufman (2000) investigated the effect of gender role attitudes on family formation using longitudinal data from the National Survey of Families and Households (USA) and concluded that women with egalitarian attitudes were significantly less likely than women with traditional attitudes to intend to have a child and to have had a child. Overall, the evidence suggests that the more traditional attitudes a woman holds, the more children she is likely to want and have (Scott and Morgan 1983: 902, Gerson et al. 1984: 439, Kaufman 2000, Moors 2003).

3.2.1.1 Measurement of attitudes toward women and motherhood

There are a number of psychometric instruments which measure attitudes toward women including the Sex Role Ideology Scale (Kalin and Tilby 1978), the Sex-Role Orientation Scale (Brogan and Kuttner 1976), the Sex Role Egalitarianism Scale (Beere et al. 1984), the Index of Sex-Role Orientation (Dreyer et al. 1981), and the Attitudes Toward Women Scale (Spence and Helmreich 1972). These have adequate psychometric properties including reliability and construct validity, and contribute to understanding of social attitudes towards women. However, most of these measures were developed in the 1970s and 1980s, and established validity and reliability in samples of North American college students, limiting their usefulness in the contemporary Australian context. For example, Item 2 of the Sex-Role Orientation Scale (Brogan and Kuttner 1976) refers to young girls participating in 'Little League Baseball'. Such concepts and terms are unlikely to be meaningful to people outside of North America.

Further, existing scales measure varied domains of attitudes toward women and do not always specifically test attitudes regarding motherhood. One exception is the Motherhood Inventory (Hare-Mustin and Broderick 1979) which examines attitudes

toward motherhood. However, many items in the Motherhood Inventory (Hare-Mustin and Broderick 1979) appear dated for the contemporary Australian context. For example, the items related to adoption. Item 14 of the Motherhood Inventory reads: ‘Adopted child probably born out of wedlock’, and Item 25 states: ‘Adopted children from poor unwed girls’. Social pressures on young unmarried mothers in Australia to relinquish their children for adoption have diminished, and the availability of government payments to support single parents has increased. As a result, the number of children being adopted has fallen over recent decades. Most adopted children in Australia today are the result of inter-country adoptions (Australian Bureau of Statistics 1998).

Many of the existing investigations of the relationship between attitudes toward women and motherhood and women’s childbearing desires and outcomes have used single or two item measures which produce a global notion of attitudes toward women and motherhood and have poor psychometric properties. For example, Kaufman (2000) used data from the National Survey of Families and Households (USA) to investigate the effect of gender role attitudes on family formation. Gender role attitudes were measured by combining two questions on the Survey which ask participants to indicate agreement or disagreement with the following two statements: ‘It is much better for everyone if the man earns the main living and the woman takes care of the home and family’ and ‘If a husband and a wife both work full-time, they should share household tasks equally’.

3.2.1.2 Australian studies

Most investigations of the relationship between women’s attitudes toward women and motherhood and their childbearing behaviour have been conducted in the USA. Although the USA is comparable to other developed countries such as Australia in terms of factors known to be associated with attitudes toward women and motherhood such as women’s level of education and paid workforce participation, the USA, unlike Australia, has consistently had replacement or close to replacement level fertility since 1990 (National Center for Health Statistics 2008). There are many factors that can influence a country’s fertility rate, such as differences in social and economic development (Australian Bureau of Statistics 2008c: 23), and cultural and social

norms. The relatively high fertility rate (for a Western developed country) in the USA has been attributed to a number of factors including a large inflow of Hispanic immigrants, high teenage fertility and access to cheap childcare (Caldwell et al. 2002: 14). These factors are not relevant to the Australian context. For example, the teenage fertility rate in Australia is low and has fallen over the last 20 years (Australian Bureau of Statistics 2008a). Accordingly, it may be that the factors which are salient in North American women's childbearing behaviour are different to those which are important in the behaviour of women from low fertility countries such as Australia.

There are few Australian studies which have investigated the contribution of attitudes toward women and motherhood to women's childbearing behaviour. Mitchell and Gray (2007) recently examined the relationship between attitudes toward women and motherhood childbearing expectations in childless Australian women using data from the Australian Negotiating the Life Course Study. Participants were divided into two groups based on their fertility expectations: those who thought it was likely that they would have a child in the future and those who did not. Participants' attitudes toward women and motherhood were measured through their level of agreement ('strongly agree', 'agree', 'mixed feelings', 'disagree', 'strongly disagree') with seven statements, for example, 'a woman should give up her job whenever it is inconvenient to her husband and her children'. The statements did not constitute a validated scale. Women whose attitudes were more traditional, that is, they viewed the primary role for women as 'motherhood' (versus 'career'), were more likely to expect to have a child in the future than women with more egalitarian attitudes. However, this study was limited to the fertility expectations of childless women with no comparison with mothers. There was also no investigation of the role of attitudes toward women and motherhood in women's childbearing desires or actual childbearing outcomes.

In summary, although the evidence indicates that there is a relationship between attitudes toward women and motherhood and childbearing desires and outcomes, this been under-investigated in the Australian context.

3.2.2 Social and ‘lifestyle’ concerns

Social factors, including the preservation of a current ‘lifestyle’, concerns regarding population size and the environment, and religious affiliation and importance, are also likely to be important in childbearing outcomes.

3.2.2.1 ‘Lifestyle’

Studies of contemporary childless women frequently identify the preservation of a woman’s current ‘lifestyle’ and/or aspiration toward a certain lifestyle as a major motivator in deliberate childlessness (Baum 1983, Weston and Qu 2001b, Carmichael and Whittaker 2007). Childlessness is perceived as a way of maintaining or increasing living standards and preserving freedom which includes making possible certain activities and opportunities which the presence of children would make difficult (Baum and Cope 1980: 294, Baum 1983: 156, Weston and Qu 2001b).

Studies investigating the relationship between ‘lifestyle’ factors and women’s childbearing outcomes are summarised in Table 3.2.

Table 3.2 Studies investigating the relationship between ‘lifestyle’ factors and childbearing outcomes

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Baum & Cope (1980) UK	To investigate the factors which lead to intentional childlessness	N=232 Married childless women Participants recruited via media advertisements	Postal questionnaire	A desire to preserve ‘freedom’ was the most frequently mentioned reason for respondents’ decisions to delay or avoid childrearing.
Baum (1983) UK	To study decision-making among voluntarily childless couples in a qualitative study	N=38 Childless husbands and wives Non-random sample Participants recruited via media advertisements	In-depth interviews	Preserving freedom, and concern for social and environmental problems identified as key reasons for not having children.
Weston & Qu (2001b) Australia	To identify the reasons women and men give for not having children, and whether these change over time	Study 1: N=2,500 Women and men aged 18-34 years Study 2: N=2,000 Women and men aged 25-50 years Both samples nationally representative	Analysis based on data from two AIFS surveys: 1. 1981 Australian Family Formation Study, and 2. 1996 Australian Life Course Study	A variety of reasons for remaining childless were provided including: ‘lifestyle choices’ such as concerns about the loss of freedom that would result from having children.
Weston et al. (2004) Australia	To investigate the factors which are important in fertility decision-making in a cross-sectional large population based study	N=3,201 Women and men aged 20-39 years Recruited using random digit telephone dialling	Telephone interviews Australian Fertility Decision-Making Project	24% of women emphasised ‘lifestyle’ factors such as having time for leisure and social activities as important considerations in their decisions about having children. Childless respondents were more likely than parents to identify lifestyle factors as important.
Carmichael & Whittaker (2007)	To explore contemporary childlessness among those ‘physically able to have	N=115 women, men and couples	In-depth interviews Australian Family Formation	The preservation of a childfree lifestyle appears to be a motive for deliberate childlessness.

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Australia	children' in a qualitative study	Sub-sample from the Negotiating the Life Course Survey Recruited from an electronic telephone directory	Decisions Project	

In 2002–2003 the Australian Family Formation Decisions (AFFD) Project conducted in-depth interviews with 115 women, men and couples in eastern Australia for whom family formation was a recent, current or imminent future concern in order to enhance understanding of declining fertility in Australia (Australian Demographic and Social Research Institute 2009a). Carmichael and Whittaker (2007) analysed data from the AFFD Project to explore contemporary childlessness among those ‘physically able to have children’. Their results support the findings of previous studies and demonstrate the importance of ‘lifestyle’ in Australians’ explanations of childlessness. A childless lifestyle was viewed by participants in the AFFD study as one of considerable freedom in which people could pursue their own interests free from the responsibilities, time constraints and financial restrictions that caring for a child entails (Carmichael and Whittaker 2007: 117). Narratives about chosen childlessness in the AFFD study referred to ‘lifestyle’ concerns such as lost opportunities for travel, individual pursuits and leisure. Children were often spoken of in terms of ‘loss of freedom’ and ‘inconvenience’ (Carmichael and Whittaker 2007: 119-120).

Many of the studies which have identified ‘lifestyle’ concerns as important factors in childbearing outcomes have focused on women who have chosen not to have children. However, it has also been suggested that for many couples delayed childbearing reflects concerns about establishing a certain ‘lifestyle’ or achieving lifestyle aspirations, having a period of personal freedom before having children, and the chance to pursue leisure interests (Dion 1995).

Participants (n=3,201) in the Australian Institute of Family Studies’ Fertility Decision Making Project (Weston et al. 2004) were presented with a set of 28 items designed to tap into the main themes discussed in the fertility literature as contributing to the choices and decisions individuals and couples make about having and not having children. Respondents were asked to indicate, on a scale of 0 to 10, how important each item was when thinking about having or not having a child. High scores (8-10) indicated that the factor was considered to be particularly important to the respondent. A quarter of women and men in the study emphasised ‘lifestyle’ factors such as having time for leisure and social activities as important considerations in their

decisions about having children, and childless respondents were more likely than parents to identify lifestyle factors as important (Weston et al. 2004).

3.2.2.2 Population size and the environment

Hird and Abshoff (2000: 353) report that research conducted on childfree couples in the United States, Canada, Scotland, the United Kingdom and New Zealand indicates that concerns regarding overpopulation and social problems motivate some women to forgo having children. These may include concern for the environment; impact of overpopulation on the world's resources; and concerns about social problems children might have to deal with such as illicit drugs.

Studies investigating the relationship between population and environmental concerns and women's childbearing outcomes are summarised in Table 3.3.

Table 3.3 Studies investigating the relationship between population and environmental concerns and childbearing outcomes

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Callan (1983) Australia	To examine differences between childless adults who were early deciders and those who were postponers	N=55 early deciders N=23 postponers Purposive sample Participants responded to media articles	Mailed questionnaire	Early deciders were more likely to believe that their childlessness was influenced by concerns with overpopulation.
Ramu & Tavuchis (1986) Canada	To explore certain values that influence fertility decisions among couples with children and those who are intentionally childless	N=57 voluntarily childless couples N=58 couples with children Non-random sample Participants responded to advertisements in the media	Mailed questionnaires and interviews	Concerns about overpopulation were important in the fertility decisions of parents but not the voluntarily childless.

Baum's (1983) study of decision-making regarding voluntary childlessness in the United Kingdom (UK) identified four types of childless couples: hedonistic, idealistic, emotional and practical. When making their decision to be childless, idealistic couples took into account social and environmental problems that may affect the world in the future or are already having adverse consequences. They tended to have a pessimistic view of the world and felt that it would be unfair to bring children into the world as it is an increasingly inhospitable place. They regarded having children as a selfish act because they believed it exacerbates existing social and environmental problems.

In an Australian study, Callan (1983) found that adults who had made early, explicit decisions not to have children were more likely to report that their childlessness was influenced by concerns with overpopulation than adults who had reached voluntary childlessness through a series of postponements.

These studies have investigated voluntary childless women who tend to be more highly educated than women in the general population (Australian Bureau of Statistics 1999). Marquart-Pyatt (2005), using data from the 2000 International Social Survey Programme, found consistency across nineteen countries including the USA, New Zealand and several Western European countries with regard to the influence of education on general environmental concern and pro-environmental behavioural intentions. Specifically, individuals who were more highly educated expressed higher levels of concern for the environment. Thus, the environmental concerns of the childless women from the above studies may reflect their sociodemographic characteristics. As childless women are not representative of women in the general population it may be difficult to draw firm conclusions from these studies regarding the relationship between environmental concerns and childbearing outcomes.

Nevertheless, Ramu and Tavuchis (1986), in their comparison of voluntarily childless couples and parents in Canada, found that for the voluntarily childless group overpopulation concerns were not a factor in their decision to be childless. However, parents expressed concerns about overpopulation and accordingly, planned to limit their family size to three or fewer children. The childless couples were more highly educated than the parent couples.

There has been discussion in Australia recently regarding the need to increase the size of Australia's population (Farr 2000, Andrews 2002b, Shanahan 2002, Way 2002, Farouque 2004, Haywood 2004). As a result, it may be that fears about under-population rather than overpopulation are salient in contemporary Australian women's childbearing outcomes but women's views are unknown.

3.2.2.3 Religious affiliation and importance

Over 71 percent of Victorian women aged 25-34 years report being affiliated with a religion (Australian Bureau of Statistics 2007f). Every religion is associated with a system of personal values that are meant to guide human behaviour, and in many instances these are strongly family oriented and place emphasis on the importance of marriage and parenthood (Miller 1994, McQuillan 2004, Hayford and Morgan 2008).

Studies investigating the relationship between religious affiliation and importance and women's childbearing outcomes are summarised in Table 3.4.

Table 3.4 Studies investigating the relationship between religious affiliation and importance and childbearing outcomes

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Newman & Hugo (2006) Australia	To examine the relationship between fertility, religion and education in a qualitative study	N=38 mothers N=24 fathers (39 families) Purposive sampling and snowball recruitment	In-depth interviews	Religious affiliation is associated with higher preferred and higher achieved parity.
Frejka & Westoff (2008) Europe & USA	To assess the comparative influence of religion and religiousness on fertility in the US and in Europe in a cross-sectional population based study	Women aged 18-44 years (N not given) Participants in the European Values Survey were recruited from a multi-stage random sample of the adult population of the country 18 years old and older Participants for the National Survey of Family Growth are recruited from a random sample of US households	Data from the 2000 European Values Survey and 2002 National Survey of Family Growth (USA)	Higher fertility is associated with greater religiousness.
Hayford & Morgan (2008) USA	To examine the relationship between religiosity and fertility in a cross sectional population based study	N=7,643 women Aged 15-44 years Participants for the National Survey of Family Growth are recruited from a random sample of US households	Data from the 2002 National Survey of Family Growth	Women who reported that religion was 'very important' in their everyday life had higher fertility and higher intended fertility.

Religious affiliation and religiosity (defined as the importance of religion in daily life) have been associated with higher preferred and achieved parity (Newman and Hugo 2006, Frejka and Westoff 2008, Hayford and Morgan 2008), and voluntarily childless women are less likely to be religiously inclined or affiliated with a religion than women with children or infertile women (Ireland 1993, Marshall 1993, Australian Bureau of Statistics 1999). These findings are consistent across both small qualitative studies using in-depth interviews (for example, Newman and Hugo 2006) and larger population based quantitative studies (for example, Frejka and Westoff 2008, Hayford and Morgan 2008).

3.2.3 Interest in and readiness for motherhood and children

Several studies have investigated the relationship between an interest in and readiness for motherhood and children and women's childbearing outcomes. The methods employed and the main findings from these studies are summarised in Table 3.5.

Table 3.5 Studies investigating the relationship between interest in and readiness for motherhood and children and childbearing outcomes

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Baum & Cope (1980) UK	To investigate the factors which lead to intentional childlessness	N=232 Married childless women Participants recruited via media advertisements	Postal questionnaire	A dislike of the prospect of rearing a baby or a general dislike of children were important factors in the decision not to have children.
Baum (1983) UK	To study decision-making among voluntarily childless couples in a qualitative study	N=38 Childless husbands and wives Non-random sample Participants recruited via media advertisements	In-depth interviews	Some participants decided not to have children primarily because they did not like and had no desire to have children.
Dion (1995) Canada	To identify the psychological factors associated with delayed parenthood	N=1114 Women aged 20-40 years expecting their first child Participants recruited from antenatal classes	Interviews and questionnaires	Psychological readiness for parenthood was related to the timing of parenthood.
Weston & Qu (2001b) Australia	To identify the reasons women and men give for not having children, and whether these change over time	Study 1: N=2,500 Women and men aged 18-34 years Study 2: N=2,000 Women and men aged 25-50 years Both samples nationally representative	Analysis based on data from two AIFS surveys: 1. 1981 Australian Family Formation Study, and 2. 1996 Australian Life Course Study	A variety of reasons for remaining childless were provided. The most common reason was a general lack of interest in being a parent or having children.
Weston et al. (2004)	To investigate the factors important in fertility decisions in a cross-	N=3,201 Women and men aged 20-39 years	Telephone interviews AIFS' Fertility Decision	A range of issues were identified as important factors in fertility decision making including giving their

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Australia	sectional large population based study	Recruited using random digit telephone dialling	Making Project	child(ren) a sibling.
Benzies et al. (2006) Canada	To examine the factors that influence women's decisions about the timing of motherhood in a qualitative study	N=45 Women aged 20-48 years (26 mothers, 8 pregnant women and 11 childless women) Convenience sample Women recruited through word of mouth, obstetrician clinics, parenting classes, and posters in public places	Telephone interviews and focus groups	Many women reported feeling 'ready' to have children and that they wanted to have a family.
Carmichael & Whittaker (2007) Australia	To explore contemporary childlessness among those 'physically able to have children' in a qualitative study	N=115 women, men and couples Sub-sample from the Negotiating the Life Course Survey Recruited from an electronic telephone directory	In-depth interviews (Australian Family Formation Decisions Project)	A lack of interest in children and rejection of the maternal role as central to women's lives and identities contributed to voluntary childlessness for many women.

Some individuals decide not to have children primarily because they do not like children and have no desire to become parents (Baum 1983: 159). One of the main factors affecting participants' decisions not to have children in Baum and Cope's (1980) investigation of intentional childlessness in Britain was either dislike of the prospect of rearing a baby or a general dislike of children.

Weston and Qu (2001b) used data from two surveys, the Australian Family Formation Study and the Australian Life Course study, conducted by the Australian Institute of Family Studies in 1981 and 1996 to explore people's reasons for not having children. The most common reason given for remaining childless was a general lack of interest in being a parent or having children. Similarly, several women in Carmichael and Whittaker's (2007) study of childlessness in Australia had rejected a maternal role as central to their lives and identities. Comments from ten participants were used to illustrate this finding. They reported not wanting or liking children and having no interest in babies or 'maternal instinct'.

However, the age of these studies (with the exception of Carmichael and Whittaker's (2007) recent study) may limit the ability to generalise their findings to women currently of childbearing age. There may have been social changes and changes in community attitudes since these studies were conducted. Furthermore, although these studies have identified a lack of interest in children and motherhood as a contributory factor in women not having children, it is not as well understood if an interest in motherhood may be a reason why women want to have children.

Several recent studies of fertility decision-making have indicated that an interest in motherhood was an important factor in women's childbearing outcomes. Some women in Benzies et al.'s (2006) Canadian study of delayed motherhood reported that having children was important in their life. For example, one participant stated that 'more than trips ... or having a big house ... what I wanted in life was a family'. Others commented that they were ready to have children because they had satisfied personal goals and would not feel like they were missing out on anything by having children. However, the participants were primarily well educated women. Accordingly, the characteristics of the sample may limit the ability to generalise the study's findings to other populations.

Psychological readiness to have children was also identified by the participants in Dion's (1995) investigation of the psychological factors associated with delayed parenthood. Psychological readiness was reflected in responses such as feeling settled, stable, personally secure and emotionally ready. However, the women in this study were mostly married (95 percent) or in a cohabiting relationship (5 percent), and aged in their thirties. Therefore, the findings of the study may not be applicable to other women such as single women or women of different ages.

Beliefs about family composition such as having more than one child, having at least one child of each sex or having the 'right' age gap between children may also be important in women's childbearing outcomes. Almost 40 percent of participants in Australian Institute of Family Studies' Fertility Decision Making Project identified giving their child a sibling as an important reason to have more children (Weston et al. 2004).

Therefore, it appears that an interest in, and readiness for, motherhood and children, and beliefs about family composition may be salient factors in women's childbearing outcomes. However, to date this relationship, with the exception of the Australian Institute of Family Studies' Fertility Decision Making Project, has mainly been tested in samples unrepresentative of women in the general population.

3.2.4 Parity

Studies of reproductive decision-making typically investigate the factors which contribute to 'having' or 'not having' children, or moving from childlessness to parenthood but do not examine whether these factors and their importance vary by parity. Third and higher order births make a significant contribution to maintaining the fertility rate around replacement level (Berinde 1999: 350, Meyer 1999: 32). It is therefore important to understand the factors which facilitate the transition to first birth and the transition from first to second birth and from second to third birth and so on (Kippen 2004).

It has been suggested that family formation should be viewed as a sequential process where couples move from one parity to the next and decisions about childbearing are made one birth at a time (Namboodiri 1974: 45, Kyriazis 1979, Shapiro Fried and

Udry 1980: 201, Udry 1983: 117). Studies investigating the factors which affect parity progression are summarised in Table 3.6.

Table 3.6 Studies investigating the factors which affect parity progression

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Kyriazis (1979) Canada	To determine whether fertility decision making is a sequential process in a large population based study	Married Catholic and Protestant women aged 19-39 years	Data from the 1971 Canadian Census Parity specific analyses	The number of children already born, as well as the couple's social and economic circumstances, affect the timing and probability of every subsequent birth.
Shapiro Fried & Udry (1980) USA	To examine the relationship between normative pressures and fertility planning	N=572 couples Women aged 33 years or less Sample is a sub-sample of a panel study (Wave 2). Sample obtained from Census	Interviews	Normative pressures, both expected and experienced, are related to parity. Prenatal pressures decrease and antenatal pressures increase with increasing parity.
White & Kim (1987) USA	To investigate whether determinants of fertility choices vary by parity	N=1,020 Husbands and wives Aged < 55 years Nationwide survey Participants recruited through random digit dialling	Panel data from telephone interviews (3 years apart)	The authors concluded that because the alternatives to childbearing vary by parity so too do the factors that affect decision-making.
Berinde (1999) Sweden	To investigate the transition from two to three children	N=1,197 Nordic born women living in Sweden aged 23-43 years All mothers of 2 children Stratified simple random sample	Data from 1992 Swedish Family and Working Life Survey	Women with university education or have a more recent marriage are more likely to have a third child.
Ekert-Jaffe et al. (2002) France & UK	To study the family formation process by women's socio-occupational category	Women born during the 1950s in France and in England and Wales	Data from birth registration records and censuses	Blue-collar workers, teachers and nurses have a higher probability than university-educated managers of having a second child. The likelihood of having a third child is lowest for white-collar workers and highest for economically

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Olah (2003) Sweden & Hungary	To investigate the effect of combining parenthood and labour force attachment on having a second child	N=2,492 (Sweden) N=3,024 (Hungary) Women and men in intact partnerships Stratified simple random sample from the National Population Registers	Data from the Swedish and Hungarian Fertility and Family Surveys of 1992/93	inactive' women. Second birth intensity increases as the combination of parenthood and labour-force attachment of either parent is facilitated.
Maher et al. (2004) Australia	To examine how women and men determine whether or not to have children, and what informs these decisions in a qualitative study	N=114 women and men Parents and childless individuals Women aged 21-52 years Recruited via advertisements in the community and media, and snowballing	Qualitative interviews (telephone or face-to-face)	'Family friendly' policies and initiatives were important for decisions about second and subsequent children but were not a factor which affected first birth timing or decisions.
Gray & Evans (2005) Australia	To examines the impact of sex of existing children on parity progression in a cross-sectional population based study	N=875 women Mothers of at least one child Recruited from electronic telephone directory	Data from Wave 1 of the Negotiating the Life Course Study	Sex of children has some impact on explaining parity progression in Australia, particularly for recent cohorts of childbearing women.
Newman & Hugo (2006) Australia	To explore influences of religion and education on parity in a qualitative study	N=39 families Purposive sampling and snowball recruitment	In-depth interviews and 1996 Census data for South Australian women aged 40-44 years	Attendance at religious services as a child and affiliation with particular religious denominations were related to higher desired and achieved parity.
Newman (2008) Australia	To consider how physical and socio-psychological experiences of childbearing and early childbearing affect parity progression in a qualitative	N=39 families with 1, 2 or 3 or more children aged 1-6 years Purposive sampling and snowballing recruitment	Qualitative interviews	Fertility and family size are influenced both negatively and positively by experiences of having had children

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Lain et al. (2009) Australia	study To assess the change in birth rates after the introduction of the 'Baby Bonus' payment (payment designed to assist with the costs of a new baby) in a longitudinal study	N=853,606 women aged 15-44 years	Data from birth records and Australian Bureau of Statistics population estimates	Rates of first births were not affected by the bonus. However, rates of third or subsequent births increased in the first two years after the introduction of the bonus.

White and Kim (1987), using a rational choice theoretical perspective, argue that a couple make a decision to have a first child and depending on that experience and subsequent changes in their circumstances decide whether to have another and so on. They concluded that because the alternatives to childbearing vary by parity so too do the factors that affect decision-making. For example, the decision to have a first child is a choice of parenthood over non-parenthood, while a rewarding career may be viewed as an alternative to childbearing after the first child. However, this study only examined the proportion of participants who had a(nother) child during the three year period between interviews. It maybe that individual's childbearing outcomes and the factors which contribute to them may be different if another time period were evaluated. Furthermore, all the participants were married, limiting the ability to generalise the findings to unmarried populations.

Studies have indicated that the factors associated with fertility are likely to differ for each additional parity progression (Townes et al. 1980: 215, Beckman et al. 1983: 524, Fisher and Charnock 2003: 6). A number of factors have been identified which influence the progression to higher order births including the sex composition of existing children (Gray and Evans 2005); providing a sibling for the first child (Callan 1982: 389); 'family friendly' employment policies and initiatives which assist employees to balance their family and paid work roles (Olah 2003, Maher et al. 2004); government financial incentives (Lain et al. 2009); previous experiences of parenthood (Newman 2008); religious affiliation, importance and attendance (in that, many religions value large families and therefore, women affiliated with a religion are more likely to want and have more children) (Newman and Hugo 2006); normative pressures (such as pressure from significant others to have or not have a child, or criticism regarding current number of children) (Shapiro Fried and Udry 1980); maternal age at first birth (in particular, women who commence childbearing at later ages have less reproductive time available to have (more) children) (McDonald 2002b); marital status (women who experience relationship breakdown are less likely to have further children) (Berinde 1999, Ekert-Jaffe et al. 2002); education level (women with a higher level of education level are more likely to commence childbearing at a later age and therefore, have fewer children) (Berinde 1999, Ekert-

Jaffe et al. 2002, Olah 2003, Newman and Hugo 2006); occupational status (Ekert-Jaffe et al. 2002); and participation in the paid work force (Berinde 1999, Olah 2003).

Although several studies have examined factors which are related to parity progression for Australian women, most have investigated the influence of only a specific factor (such as financial incentives (Lain et al. 2009), or sex composition of existing children (Gray and Evans 2005)). Accordingly, the role parity plays in Australian women's childbearing outcomes is not well understood. However, evidence from studies conducted in other developed countries (such as those cited above) suggests that different (and multiple) factors may affect women's childbearing outcomes at different parities and therefore, each birth parity requires separate analysis (that is, the decision to have the first child and decisions to have subsequent children).

3.2.5 Influence of partners and significant others

The focus of much empirical research on the factors influencing fertility preferences and outcomes has been the influence of women's individual characteristics on their childbearing desires and outcomes (Corijn et al. 1996: 117, Thomson 1997: 343, Greene and Biddlecom 2000: 81, Voas 2003, Rijken and Liefbroer 2009: 28, Rosina and Testa 2009). The influence of partners and significant others such as women's mothers or other family members on their childbearing behaviour, in particular, for Australian women, has not been fully considered. As Greene and Biddlecom (2000: 81) comment 'the predominant approach assumes that men might be interesting to study but are not inherently important for understanding reproductive behaviour'. Nevertheless, Miller and Pasta (1996: 309) argue that childbearing intentions are influenced by the perceived desires of significant others.

3.2.5.1 Lack of a (suitable) partner

Intentions about having children appear to be linked to expectations about relationship status (Qu et al. 2000: 17). Fisher and Charnock (2003) examined data from Wave 1 (2001) of the Household Income and Labour Dynamics (HILDA) survey and found that current relationship status was the most important factor associated with whether individuals expected to have children in their lifetime. A lack of relationship

formation was linked to higher expectations of childlessness. Furthermore, it has been suggested that women who do not currently have a partner may intend to have children after they have found a suitable partner (Qu et al. 2000: 17, Weston and Qu 2001a: 7).

Relationship status also contributes to fertility outcomes. The Australian Institute of Family Studies' Australian Family Formation Project was a national longitudinal study conducted in 1981 (when participants were 18-34 years old) (Wave 1) and about ten years later (late 1990 to early 1991) (Wave 2). Qu et al. (2000: 18) examined the relationship between relationship status and childbearing outcomes for the 783 participants (358 women and 425 men) who did not have children in Wave 1. They found that the people most likely to have had children were those who had the same partner in both waves of the Project, and very few participants who were continuously single reported having children by Wave 2 (Qu et al. 2000: 18).

Similar data from the British Household Panel Survey show that the odds of having a birth are three times higher for women with a partner suggesting that having a partner is a key factor affecting the likelihood that a woman will have a child (Berrington 2004). The lack of a suitable partner was also one of the most important reasons given by participants in Maheshwari et al.'s (2008) Scottish study of the factors associated with delayed childbearing.

It is not only lack of a partner that is related to women's childbearing desires and outcomes. Difficulty finding the 'right' partner who will commit to having children and be a good parent may also be influential. Women may not want to risk childbearing without reasonable assurance that they will receive support from their partner and a genuine sharing of childcare and housework (Carmichael and Whittaker 2007). McAllister and Clarke (1998) interviewed 34 voluntarily childless women in the UK about their decisions not to have children. They found that some women (the proportion was not stated) were dissuaded from having children because they did not think their partners would help in the raising of those children.

3.2.5.2 Partner's preferences

Research on couple decision-making shows that men's preferences are important in fertility outcomes (Morgan 1985: 125, Thomson et al. 1990: 586, Thomson 1997: 351, Thomson and Hoem 1998: 322, Fisher and Charnock 2003: 5, Maher et al. 2004: 26). Yet, women's partners may have different fertility preferences from their own, and these differences may have consequences for women's future childbearing (Thomson 1997: 343, Voas 2003).

Studies investigating the relationship between women's partners' preferences and childbearing desires and outcomes are summarised in Table 3.7.

Table 3.7 Studies investigating the relationship between women's partners' preferences and childbearing desires and outcomes

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
Beckman et al. (1983) USA	To analyse antecedents of young couples' fertility decisions and outcomes in a longitudinal study	N=509 married couples (both childless and parents) Wives aged 18-34 years Participants randomly selected from birth and marriage records, and using a snowballing technique	Two interviews for each participant Each partner interviewed separately each time	Husbands' and wives' attitudes and motivations influence each other though the direction of this influence differed for recently married childless couples and those with children. Husbands' motivation for parenthood strongly influenced wives' motivation for parenthood for recently married couples but this pattern was reversed for couples with children.
Beckman (1984) USA	To consider the relative influence over fertility outcomes for couples in a longitudinal study	N=578 married couples (314 married childless couples and 264 parents) Wives aged 18-34 years Generally well educated couples Participants randomly selected from birth and marriage records, and using a snowballing technique	Each partner separately participated in two interviews	Wives' influence on fertility outcomes is at least as great as (or greater than) husbands'.
Thomson et al. (1990) USA	To investigate the effect of husbands' desires on couple fertility	N=904 married couples Participants selected from a random sample of married women whose second birth occurred in September 1956	Data from 1957 Princeton fertility study. A 3 wave panel study of couple fertility. Interviews conducted every three years. Only examined fertility desires after parity two Interviews	Disagreeing couples were less likely to have a child when the wife rather than the husband wanted no more children.
Miller & Pasta (1996)	To examine how couple disagreement affects the translation of fertility	N=401 married couples (201 childless couples and 200 couples with one child)	Interviews	Disagreement inhibited pregnancy seeking behaviours.

Author(s) and country	Aim of Study and Study Design	Sample	Method	Relevant Findings
USA	desires into fertility intentions in a longitudinal study			
Thomson (1997) USA	To investigate the effects of wives' and husbands' childbearing desires on their spouses' intentions	N=1,143 couples (childless and parent couples) National probability sample of households Women aged < 40 years	Interviews Self-administered questionnaire Panel data from the National Surveys of Families and Households	Husbands' desires and intentions influence birth outcomes with approximately equal magnitude to that of their wives. When couples disagreed about wanting a child, each partner's intentions were shifted toward not having a child.
Thomson & Hoem (1998) Sweden	To estimate effects of partners' childbearing plans	N=933 married or cohabitating couples (childless and parent couples) Simple random sample	Data from 1992 Swedish Survey of Family and Work, and 1992-94 marriage and birth records Interviews (partner completed questionnaire)	Disagreements were equally likely to be resolved in favour of the woman as the man. However, the proportion of couples in the sample with opposing expectations was low.
Berrington (2004) UK	To analyse gender differences in fertility intentions, and the correspondence between fertility intentions and subsequent fertility behaviour in a longitudinal study	N=1,111 couples Women aged 18-39 years Parities 0 to 3+	Data from the British Household Panel Study which surveys around 5,000 households annually (questions on fertility intentions are repeated every six years). The Study began in 1991. Both members of the couple interviewed	Having a partner with conflicting fertility intentions affected the likelihood of a future birth. Conflicting responses were likely when a woman already had two or more children.

The relative influence of the views of each member of an intimate partnership on fertility outcomes in cases of partner disagreement regarding fertility desires has been considered. Although each partner is often equally influential (Thomson and Hoem 1998), wives have been shown to have somewhat greater influence over fertility outcomes especially when the wife rather than the husband wants no more children (Beckman 1984, Thomson et al. 1990: 580). Further, the evidence indicates that couple disagreement about wanting a child inhibits pregnancy-seeking behaviours such as the discontinuation of contraception or the timing of sexual intercourse (Miller and Pasta 1996); shifts each partner's intentions toward not having a child (Thomson 1997); and affects the likelihood of a future birth (Berrington 2004: 18).

However, none of the studies discussed above has been conducted in Australia. Although these studies have been conducted in other Western developed countries such as the UK, USA and Sweden it may not be possible to generalise their findings to the Australian context. Consequently, the relationship between partner's preferences and Australian women's childbearing outcomes is not well understood.

3.2.5.3 Relationship quality

Relationship breakdown is likely to disrupt plans for childbearing (Weston and Parker 2002). Not only has divorce become easier to obtain in Australia in recent times, it has also become more socially acceptable. In 1976, the *Family Law Act* replaced 'myriad fault based' grounds for divorce with one 'no fault' ground: 'irretrievable breakdown' as evidenced by one year's separation (Carmichael 1998: 99). As a result in the early 1980s, the likelihood of a couple divorcing within 30 years of marriage increased from ten to almost 40 percent (Carmichael 1998: 99). Nevertheless, the number of divorces granted in Australia has been decreasing each year since reaching a peak in 2001 (Australian Bureau of Statistics 2008d).

Relationship quality, in regards to childbearing behaviour, is usually studied and measured in terms of the level of (perceived) stability of the relationship, that is, the likelihood of separation. It has been hypothesised that couples with a high quality relationship may be more likely to have children because their relationship constitutes a favourable environment to have a child (Lillard and Waite 1993, Myers 1997,

Rijken and Liefbroer 2009: 28). Yet, it has also been suggested that couples in a low quality relationship may have a child in order to strengthen their union (Koo and Janowitz 1983: 130, Friedman et al. 1994, Myers 1997: 1272, Rijken and Liefbroer 2009: 28).

In Canada, Benzies et al. (2006) found that a stable relationship was influential in women's decisions about the timing of motherhood. Women stated that a stable relationship was critical because they did not want to raise a child on their own. Several women reported failed long term relationships, including marriage, before they found a stable relationship they deemed suitable for childbearing and childrearing. Dion (1995) reported similar findings: stability and security in the spousal relationship influenced the timing of childbearing for currently pregnant women.

Australian research has highlighted the link between relationship instability and declining fertility (Qu et al. 2000, Barnes 2001, Weston and Qu 2001a, Weston and Qu 2001b). Fisher and Charnock (2003) analysed partnering and fertility patterns using data from Wave 1 of the HILDA Survey. They found that relationship instability was associated with higher expectations of childlessness, and expectations of only one child were linked to actual or threatened relationship breakdown.

Uncertainty and instability of relationships also adversely affected the maternal aspirations of women interviewed in the Australian Family Formation Decisions Project. Women commented that relationships of acceptable quality were difficult to establish, or once formed, could break down at inopportune times, or failed to inspire confidence that they would endure affecting their plans to become mothers (Carmichael and Whittaker 2007: 139).

Overwhelmingly the evidence suggests that a stable relationship is associated with a desire for children and the birth of children. As Weston and Qu (2001a: 2) have commented, it appears that difficulties in finding a suitable partner or maintaining a secure relationship and cohabiting relationships that end in separation may hinder women's chances of (ever) having children.

3.2.5.4 Pressure from significant others

Although much of the literature which has examined the influence of others on women's childbearing desires and outcomes has focused on the influence of women's partners, it has been proposed that significant others (such as immediate family members and close friends) in an individual's social network may also be influential (Miller 1994). Ajzen and Fishbein's (1980) psychological theory of reasoned action which is often used to explain fertility behaviour includes a normative component in which the wish to comply with significant others' expectations motivates an individual to achieve a particular fertility outcome. Significant others influence childbearing through the expression of approval (or disapproval) and encouragement (or discouragement) of childbearing (Miller 1994).

Studies investigating the relationship between pressure from others and women's childbearing desires and outcomes are summarised in Table 3.8.

Table 3.8 Studies investigating the relationship between pressure from others and women's childbearing desires and outcomes

Author(s) and country	Aim of Study and Research Design	Sample	Method	Relevant Findings
Baum & Cope (1980) UK	To investigate intentional childlessness	N=232 Married childless women	Postal questionnaire	85% of the wives said they had found people encouraging them to have children or concerned about them not having any. The chief source of this pressure was colleagues at work or friends. Wives who had made the definite decision never to have children were subject to the greatest pressure.
Shapiro Fried & Udry (1980) USA	To examine the relationship between normative pressures and fertility planning.	N=572 couples Women aged 33 years or less	Structured interviews	A substantial proportion of respondents had experienced direct social pressure with respect to childbearing. However, social pressures were not important influences after parity two was reached.
Crawford & Boyer (1984) USA	To investigate the expectations of significant others regarding women's childbearing behaviour	N=163 Married white women with 0, 1 or 2 children Aged 18-26 years Recruited via purposive sampling of birth and marriage records	Semi-structured interviews	Women with one child reported experiencing the strongest pronatalist normative pressures. The perceived preferences of significant others were most closely related to childbearing plans for childless women.
Miller (1994) USA	To examine biological, psychological, and social normative factors that motivate childbearing in a longitudinal study	N=401 201 married childless couples and 200 married couples with one child	Interviews 4 questions that asked how the respondent's mother and the father, and two closest friends felt about him/her having a(nother) child.	The influence of both parents and friends made a major contribution to individuals' childbearing intentions.
Barber & Axinn (1998) USA	To investigate the influence of parents on their children's family formation behaviour in a longitudinal study	N=867 mother-child pairs Married white women Children <23yrs Detroit metro area	Longitudinal panel data Hazard modelling techniques	Mothers influenced the fertility preferences of both young women and men.

Author(s) and country	Aim of Study and Research Design	Sample	Method	Relevant Findings
Mueller & Yoder (1999) USA	To explore women's experiences with their real life family choices	N=60 Women aged 50 years and younger, married at least 10 years Mostly, white, university educated and employed women Childless women and mothers Snowball recruitment	Semi-structured interviews and questionnaire	Ratings of overall perceived pressure were generally low. Childless and one child participants did not report facing 'special pressures' from would be grandparents.
Langdridge et al. (2000) UK	To investigate the reasons for parenthood among couples expecting a baby, and couples presenting for fertility treatment in a network analytic study	N=34 couples 10 couples expecting first child 24 couples undergoing fertility treatment Recruited from antenatal and fertility clinics	Structured interviews Network analysis	No participants identified pressure from significant others as a factor which influenced their desire for a child.
Vissing (2002) USA	To explore why women do not have children and how childlessness affects their lives in a qualitative study	N=125 Middle aged childless women Snowball recruitment	In-depth interviews	Families put both direct and subtle pressure on women to have children. Women who were only children or only daughters felt more pressure from their families to reproduce. Friends also put pressure on women to have children.
Keim et al. (2009) Western Germany	To investigate the impact of social relationships on individuals' and couples' fertility intentions and behaviour in a qualitative study	N=35 Women and men aged between 28-32 years Most childless	Semi-structured interviews	The core family was an important factor of influences but social relationships beyond the core family of parents and siblings were also influential in the family formation of individuals.

Immediate family members, in particular mothers and mothers-in-law, and close friends seem to be the most influential members of an individual's social network in terms of childbearing desires and outcomes (Baum and Cope 1980, Shapiro Fried and Udry 1980, Crawford and Boyer 1984, Miller 1994, Barber and Axinn 1998, Vissing 2002, Keim et al. 2009: 10).

Nevertheless, much of this evidence is based on the experiences of childless women. It is not as well understood what influence significant others have on the childbearing desires and outcomes of women who are mothers or if pressure from others differs by parity, or if childless women and mothers are subjected to different amounts of pressure. A substantial proportion of the participants (which included women at parity 0 to parity 2+) in Shapiro Fried and Udry's (1980) study of the relationship between normative pressures and family planning had experienced direct social pressures from relatives such as parents, parents-in-laws or siblings, and close friends with respect to childbearing. However, two more recent studies which compared the experiences of mothers and childless women suggest that overall pressure from others to have children is either low (Mueller and Yoder 1999), or not a factor which influences women's childbearing desires and outcomes (Langdridge et al. 2000). The difference in findings between these studies may reflect the time at which they were conducted. Shapiro Fried and Udry's (1980) study was conducted almost two decades earlier than the studies by Mueller and Yoder (1999), and Langdridge et al. (2000). It is possible that there were changes in social attitudes and expectations on women to have children during this time period.

However, pressure from significant others appears to be linked to parity. Women who have two to three children are less likely than childless women or women with one child to feel pressure from others (such as parents and close friends) to alter their family size perhaps because they have fulfilled societal expectations regarding normative family size, and suggesting that social pressures are not important influences after parity two is reached (Shapiro Fried and Udry 1980, Crawford and Boyer 1984, Mueller and Yoder 1999).

Yet, to date this relationship has mostly been tested in studies conducted in the UK, USA and Western Germany. As a result, the importance of pressure from significant others in Australian women's childbearing outcomes is not well understood.

3.2.6 Housing conditions, affordability and aspirations

Although Australian research has examined the relationship between where women live and their fertility rate, there has been little investigation of the relationship between housing conditions and women's childbearing desires and outcomes. Data from the first two waves of the Negotiating the Life Course Survey suggest that almost all Australians aspire to own their own homes but for a number of reasons may not be in a position to achieve owner-occupied status (Merlo and McDonald 2002: 22). The overall rate of home ownership in Australia has been steady since the 1960s, with approximately 70 percent of occupied private dwellings being owned outright or being purchased. Yet, the age profile of home owners and purchasers has changed over the last twenty years with a decline in home ownership among younger adults (Australian Bureau of Statistics 2004c). The recent real estate 'boom' and increase in property prices especially in the capital cities at the time of this study (Australian Bureau of Statistics 2004e) may be making home ownership more difficult for many Australians.

In Western developed countries, family formation and home ownership have been found to be closely connected. The transition to first time home ownership is associated with marriage and is often made in anticipation of parenthood (Mulder 2006: 282).

The relationship between family formation and home ownership has generally been regarded as positive in that home ownership facilitates family formation (Mulder 2006: 288). Many of the women interviewed in McAllister and Clarke's (1998) qualitative study of childlessness in Britain expressed the view that a stable and desirable home was a prerequisite for having children. Many couples presumably prefer to secure suitable housing before they have their first child, and access to suitable housing may lead couples to have their children earlier (Mulder 2006: 288).

Yet, Mulder (2006), using existing empirical evidence from Europe and the USA, argues that the relationship between home ownership and family formation is not straightforward. She suggests that a negative association between family formation and home ownership exists at the individual or household level as the cost of home ownership may compete with the cost of raising children (Mulder 2006: 281). This cost competition may lead to the postponement of childbearing or lower fertility among those who attach importance to acquiring a home. Difficulties in acquiring a home may lead to postponement of parenthood which may result in fewer children (Mulder 2006: 289).

In Britain, home ownership was found to be associated with low rather than high fertility. Murphy and Sullivan (1985) examined the relationship between housing tenure and family formation in Britain using data from the General Household Survey 1977 and the Family Formation Survey 1976. They found that home owners had fewer children than renters and had them later. They concluded that couples who wished to become home owners may have delayed childbearing until they had sufficient savings for a house deposit and income to pay a mortgage.

In Australia, house mortgages have been characterised as the ‘new contraception’ (Arndt cited in Lattimore and Pobke 2008: 47), and it has been suggested that the ‘stamp duty charged by states on house sales [is] a real barrier to couples starting families’ (Vanstone cited in Marris 2002). The Australian Institute of Family Studies’ Fertility Decision Making Project confirmed that the inability to buy, renovate or move house was associated with lower fertility. Yet, such housing concerns were ranked by participants in this study as relatively low in importance among the factors examined (Weston et al. 2004).

It appears that there is a relationship between housing and childbearing; home ownership typically leads to delayed childbearing and fewer children. However, most of the existing evidence has been gathered in countries other than Australia such as the UK in small qualitative studies (for example, McAllister and Clarke 1998), or through the secondary analysis of existing data (for example, Murphy and Sullivan 1985, Mulder 2006) which although allowing for a greater breadth of data to be examined also has limitations including (relatively) old data, the use of data not

specifically collected to examine this particular relationship, and data collected using different methods and definitions making comparisons between the studies difficult.

3.2.7 Education debt

Australian women are increasingly likely to participate in higher education (Australian Bureau of Statistics 2005). Women who have an undergraduate degree or higher level qualification are more likely to delay the first birth and have fewer or no children than women who do not have post secondary school qualifications (Jain and McDonald 1997, McDonald 1998, Barnes 2001, Australian Bureau of Statistics 2002c, De Vaus 2002). It has been suggested that this is the result of circumstance rather than women's childbearing preferences. Despite the fact that Australian women who are university graduates desire above replacement level numbers of children, the time taken to complete higher education and establish themselves in the paid workforce may lead to delays in childbearing and age related infertility (Franklin and Chee Tuono 2004).

Women's childbearing outcomes including the timing of giving birth to children may also be influenced by education debts. Contemporary Australian students are required to fund some of the costs of higher education through the repayment of interest free loans made by the Australian government. The Higher Education Contribution Scheme (HECS) was introduced in Australia in 1989. Graduates repay their HECS debt if and when their personal income reaches the compulsory payment threshold (which was approximately AUD36,000 per annum in 2005-06). In 2005, government higher education reforms replaced HECS with the Higher Education Loan Program (HELP) but the general nature of the student contribution remained the same (Australian Bureau of Statistics 2008b). It is estimated that most Australian university students will graduate with a HECS debt of between at least AUD10,000 and AUD20,000 (Australian Bureau of Statistics 2004d).

Media and other populist commentary has recently focused on the effects of HECS on fertility with some arguing that women who have large debts may delay or hesitate to have children and have fewer children (Yu et al. 2007).

Jackson (2002: 105) has also argued that the cost of paying off a HECS debt may cause university educated women 'to delay their childbearing and/or have fewer children than they otherwise would'. However, Jackson (2002: 105) noted that, because of a lack of data, she was unable to test her hypothesis that there is a relationship between HECS debt and lower fertility.

Yu et al. (2007) using Household, Income and Labour Dynamics in Australia (HILDA) Survey data from Waves 1 and 2 found no evidence of an association between HECS debt and expected lifetime fertility. Nevertheless, Marks (2009: 82), in contrast to Yu et al. (2007), found that HECS debt was negatively associated with having children, in particular, the size of the HECS debt had a negative impact on the decision to start a family. However, although Marks (2009) also used HILDA data, his analysis is related to actual fertility rather than fertility expectations which Yu et al. (2007) examined. Furthermore, the impact of HECS debt on fertility was moderate compared to other factors examined such as being in paid full-time work in the previous year and marital status.

Therefore, despite popular assertions that women with large education debts may delay or limit their childbearing, there is little empirical evidence that education debts affect childbearing outcomes and expectations directly. However, as Norton (2003) argues, most women with a HECS debt are still relatively young so it is difficult to determine whether a HECS debt will affect their completed family size. Nevertheless, Norton contends that the evidence suggests that the connection is between university education itself, rather than HECS debt, and lower fertility.

3.2.8 Paid employment and family responsibilities

The proportion of Australian women in the paid labour force has increased steadily over the last quarter of a century. For women of childbearing age (15–44 years), the labour force participation rate has risen from 59 percent in November 1980 to 71 percent in November 2005 (Australian Bureau of Statistics 2007c).

It has been argued that 'women's labour force behaviour lies at the heart of most explanations of fertility and fertility change' (Brewster and Rindfuss 2000: 271). A negative relationship has been found between women's employment and fertility

(Hank and Kreyenfeld 2003: 584). Fertility rates are lower among women with higher levels of participation in the paid workforce and who are in professional or related jobs (Jain and McDonald 1997, Brewster and Rindfuss 2000: 279, McDonald 2000a, De Vaus 2002, Vanstone 2002).

Women regard paid employment as important for financial, social and personal reasons (Maher et al. 2004: 23). Yet, the capacity of women to combine paid employment with childbearing and rearing may influence their childbearing desires and outcomes. This may include access to leave for the birth and subsequent care of their child; access to quality and affordable child care; flexible working arrangements; and job security.

3.2.8.1 Maternity leave

Leave from paid employment is crucial to the health and wellbeing of mothers and babies. It enables women to recover from the birth, develop a bond with their baby and establish feeding. Leave from work is also important to maintaining women's attachment to the labour force and provides some job security (Australian Bureau of Statistics 2007c).

Prior to 2009, Australia did not have a government-funded paid maternity leave scheme and women were reliant on their employers for paid maternity leave. However, legislation did provide fifty-two weeks of unpaid maternity leave following the birth or adoption of a child to eligible permanent and casual employees with at least twelve months continuous service with their current employer (Australian Bureau of Statistics 2007c). In 2005 (the year data were collected for this study), only 41 percent of women employees were entitled to paid maternity leave. Women in higher paid and higher skilled positions, and in the public sector were more likely to be entitled to paid maternity leave (Australian Bureau of Statistics 2007c).

Little research has been conducted in Australia to date regarding the relationship between the availability of maternity leave and women's childbearing behaviour. International studies have mixed results. Using European data, Hantrais (1997) concluded that there was not a direct relationship between the availability of paid maternity leave and an increase in the fertility rate (Hantrais 1997). However, in the

USA, Averett and Whittington (2001) found that the probability of a birth increases as a result of maternity leave availability, and that the fertility effect of maternity leave increases with birth parity. The study did not differentiate between paid and unpaid maternity leave, although the authors did note that the availability of paid maternity leave in the USA during the time period of the study was rare.

While most participants in Maher et al.'s (2004) qualitative study of fertility decision-making in Victoria (Australia) (n=100 women) reported that the availability of paid maternity leave was not a factor in their decision to have children, policies and entitlements such as maternity leave were important for women who already had a child and were considering having more children. However, as Maher et al. (2004) commented only a quarter of their participants had access to paid maternity leave and accordingly, it was difficult to ask women to determine how maternity leave had affected their childbearing decisions when so few actually had access to it. Also, given the recruitment method (self-selection and snowballing), small sample size (n=100) and lack of detail provided regarding the sociodemographic characteristics of the participants, it is difficult to draw generalisations from the findings for the population as a whole.

Wave 3 (2003) of the HILDA Survey is one the first data sets to include Australia wide information on employees' maternity leave entitlements including those who do not know if they have any maternity leave provisions. Using this data, Risse (2006) examined the age-specific pregnancy rates within the past year of employed women according to their paid and unpaid maternity leave entitlements. She found that the availability of maternity leave was related to pregnancy rates but the effect depended on a woman's age and whether the maternity leave was paid or unpaid. Young women's (less than 25 years) fertility was positively influenced by the availability of paid or unpaid maternity leave. The childbearing behaviour of women in the peak childbearing years (25-35 years) was positively influenced by the availability of unpaid maternity leave, but they were unaffected by paid maternity leave. However, older women (more than 35 years) were unresponsive to any form of maternity leave entitlement which may be because as these women are closer to the end of their childbearing years they have less 'choice' about the timing of their pregnancies and

therefore, are more influenced by personal preferences than employment policies. Risse (2006) argues that the findings imply that the availability of maternity leave does not affect women's decisions about having or not having children but rather the timing of their childbearing and encourages women to have children earlier.

3.2.8.2 Child care

In general, women take primary responsibility for childrearing which often makes it difficult for them to commence or continue paid employment once they become mothers (Hank and Kreyenfeld 2003: 585). Therefore, women who wish to participate in paid employment must either limit their fertility or make alternative arrangements for the care of their children (Brewster and Rindfuss 2000: 272).

A range of child care types are available to Australian families. Formal care is regulated care away from the child's home and includes long day care centres open for at least eight hours per day; family day care which is care from a registered carer in the carer's home; and preschool (kindergarten). Informal care is non regulated care either in or away from the child's home such as care from grandparents, other relatives or paid babysitters. In 2008, 9 percent of children under one year usually attended formal care. At age one the proportion usually attending formal care was 35 percent; by age two it was 48 percent; and at age three it was 50 percent. Long day care was the type of child care most commonly used for children up to three years of age. Around a third of children aged one to four years were usually cared for in an informal care setting. At age four, most children attend preschool. By age five most children have started school, though some may attend before or after school care. Work-related reasons are the most frequent reasons given for Australian children's attendance in formal care (Australian Bureau of Statistics 2009). The cost of child care is subsidised by the Australian government, the Child Care Benefit and Child Care Tax Rebate are payments to assist eligible families who use approved or registered child care (Australian Bureau of Statistics 2009).

Studies investigating the relationship between child care and women's childbearing desires and outcomes are summarised in Table 3.9.

Table 3.9 Studies investigating the relationship between child care and women's childbearing desires and outcomes

Author(s) and country	Aim of Study and Research Design	Sample	Method	Relevant Findings
Lehrer & Kawasaki (1985) USA	To examine the relationship between child care arrangements and fertility in a cross-sectional study	N=599 Married, employed women under 35 years with children living in the household Recruited from a random sample of US households	Data from the 1976 National Survey of Family Growth	Women who rely on relatives rather than organised child care (i.e. child care centres and babysitters) are more likely to intend further births.
Blau & Robins (1989) USA	To examine the effects of child care costs on fertility decisions in a longitudinal study	N=6,170 employed N=8,940 not employed Married women Average age = 30.3 years Women of different parities (0 – 4+)	Data from household survey Data collected over 22 months	Higher child care costs resulted in a lower birth rate for non employed women but not for employed women.
Mason & Kuhlthau (1992) USA	To examine the impact of child care constraints on fertility behaviour in a cross-sectional study	N=1,383 Mothers of preschool aged children Probability sample of women aged 15-39 years living with at least one child born in January 1980 or later	Structured interviews	3.6% of the sample reported that child care problems had ever led them to postponing a child they wanted. 8.3% reported that such problems had led them to reduce their total number of children.
Kravdal (1996) Norway	To assess how expansion of day care facilities affects fertility in a parity specific analysis using longitudinal data	N=4,019 women National representative probability sample	Data based on interviews from the 1988 Norwegian Family and Occupation Survey Linked to population register data for 1974-1987	The local coverage rate was positively associated with the probability of advancing from parity two.

Author(s) and country	Aim of Study and Research Design	Sample	Method	Relevant Findings
Del Boca (2002) Italy	To examine the effect of child care and part time opportunities on participation and fertility decisions in a longitudinal study	N=1,708 Random sample of married women aged 21-45 years	Panel data from the Survey on Household Income and Wealth of the Bank of Italy Survey (1991–1995)	The availability of child care and part time work increased both the probability of working and having a child.
Hank & Kreyenfeld (2003) Western Germany	To investigate the role of child care availability in women's fertility decisions (especially for the transition to the first and second child) in a longitudinal study	First births N=2,892 Women aged 20-35 years Second births N=1,585 Women aged 25-40 years	Data from the German Socio-Economic Panel Study (1984-1999) and German Youth Institute regional data-bank	Access to informal care arrangements increased the probability of entering parenthood, but there was no statistically significant effect of the availability of publically provided child care on fertility.
Maher et al. (2004) Australia	To examine how women and men determine whether or not to have children in a qualitative study	N=114 Women and men Included mothers and childless women Women aged 21-52 years Recruited from advertisements in the community and media, and snowballing	Qualitative interviews (telephone or face-to-face)	One third of respondents indicated that the availability, quality and affordability of child care were factors they took into consideration in deciding to have their first or subsequent child.

There is evidence that the cost, quality and availability of child care influences women's childbearing behaviour with problems or constraints in these areas resulting in women having fewer children than they would have had otherwise or postponing a birth (Blau and Robins 1989, Mason and Kuhlthau 1992, Kravdal 1996, Del Boca 2002). Women in paid employment who have access to informal care (such as relatives) are more likely to become mothers and intend and have another birth (Lehrer and Kawasaki 1985: 508, Hank and Kreyenfeld 2003). It is thought that this finding reflects both cost and availability factors. The cost of informal care (such as relatives) is likely to be less than that of formal care (such as child care centres) especially for women who have more than one child (Lehrer and Kawasaki 1985: 509, Rindfuss and Brewster 1996: 271). Informal care is also often easier to access than formal child care (Hank and Kreyenfeld 2003).

However, there is little research in the Australian context regarding the impact of child care concerns on women's childbearing desires and outcomes. The findings from mostly large quantitative studies conducted in the USA and Western European countries suggest, as Weston and Parker (2002: 10) have commented, that difficulties in accessing high quality child care, balancing child care responsibilities with paid employment as well as the cost of child care may contribute to women's decisions about having few or any children, or deferred decision-making.

3.2.8.3 Flexible working arrangements

Mothers often need to alter their work patterns to care for their children. Ariza et al. (2005) examined the relationship between flexibility of working hours, more specifically part time work, and women's decisions concerning fertility in eleven European Community countries using data from five waves of the European Community Household Panel survey. The study had mixed results. The availability of part time work was associated with increased fertility in certain countries (Belgium, Germany, Ireland, Italy and the Netherlands) but lower fertility in the other countries under analysis (Denmark, France, Greece, Portugal, Spain and the United Kingdom). They concluded that these results reflect differences between countries in terms of part time work legislation, public child care and parental leave provisions.

In Australia, flexible, available and satisfactory part time work was central to the reproductive decisions of the participants in Maher et al.'s (2004) study, especially to women's decisions about having a second or third child.

3.2.8.4 Job security

Little empirical research addresses whether there is a relationship between job security and childbearing behaviour (Bernardi et al. 2008: 289). In Canada, Armenti (2004) investigated the relationship between tenure and childbearing. In-depth interviews were conducted with nineteen women academics (assistant, associate and full professors) aged between 30 to 60 years who all either had children or were planning to have children. It was found that the women in the study planned their pregnancies with regard to their work timetables and preferred to delay childbearing until they had obtained tenure as they were concerned about the effect of having children on their career prospects.

Participants in the Australian Institute of Family Studies' Fertility Decision Making Project (Weston et al. 2004) also identified job security (38 percent of female participants) and having an established career (37 percent of female participants) as salient factors in their fertility outcomes. Childless women were more likely than mothers to stress the importance of their own job security (47 percent compared with 32 percent) and how well they were established in their career (37 percent compared with 23 percent) (Parker and Alexander 2004: 27).

For the university educated women with children in Ranson's (1998) Canadian study of the relationship between occupational choices and decisions about having children, job security was one of the most common reasons given for it being the 'right time' to have children. Therefore, it appears that the lack of a secure job may result in women postponing or not having children.

However, there is also evidence which suggests that job security is not a prerequisite to women having children. Bernardi et al. (2008) interviewed young adults in eastern and western Germany to investigate whether or not job security and family formation were related to each other, and in what ways. They found that in western Germany, a relatively secure job was a prerequisite to family formation. Participants from western

Germany would not consider having children unless they had completed their education and were fully established in a job or at least had clear job prospects. In contrast, job security and family formation were thought of and practised as parallel activities by participants from eastern Germany, who felt that having children did not require any special preconditions except having an appropriate partnership and therefore, would have children even in the absence of job security. As discussed by Bernardi et al. (2008), these findings are likely to reflect differences in the socialisation and circumstances of the participants from eastern and western Germany and therefore, the results may be difficult to extrapolate to different cohorts or regions.

3.3 WOMEN'S HEALTH AND THEIR CHILDBEARING DESIRES AND OUTCOMES

Health conditions and their treatment can interfere with fertility, or may cause complications during pregnancy (Schover 1999). Yet, women of reproductive age who have a health condition still report wanting children (Schover et al. 1999, Jancin 2004, Zebrack et al. 2004), and that motherhood is important to their identity (Fair et al. 2000, Drew 2002, McDonald 2002a).

The methods employed and the main findings from studies investigating the relationship between health factors and women's childbearing desires and outcomes are summarised in Table 3.10. The studies are grouped by health condition.

Table 3.10 Studies investigating the relationship between health factors and women's childbearing desires and outcomes

Author(s) and country	Aim of Study and Research Design	Sample Characteristics	Method	Relevant Findings
<i>HIV</i> Kline et al. (1995) USA	To examine factors associated with pregnancy and pregnancy resolution in HIV-infected women in a longitudinal study	N=238 women Aged less than 45 years Recruited from organisations providing services to HIV positive women in New Jersey	Standardised questionnaire administered by interviewer Women paid USD15 Interviews conducted every six months over a two year period	Results suggest the importance of psychosocial and cultural factors to reproductive decision-making in HIV-infected women. There is a consistency of reproductive behaviour before and after HIV infection, suggesting that the infection itself does not significantly alter existing childbearing trends. Biomedical considerations relating to the mother's health status and the risk of transmission to the child have a greater impact on decisions surrounding pregnancy resolution than they do on the probability of becoming pregnant.
Chen et al. (2001) USA	To investigate fertility desires and intentions of HIV positive women and men in a cross-sectional study	N=1,421 Women aged 20-44 years Nationally representative sample taken from the HIV Cost and Services Utilization Study	Structured interviews (face to face)	29% of the sample desired children in the future but this is lower than the overall national USA figure (36%). HIV positive individuals (especially HIV positive women) who desired children were more likely to be in better health, younger and have fewer children than those who did not desire children. Desires of partner were also influential.
McDonald (2002a) Australia	To investigate the impact of HIV diagnosis on the role of motherhood in the lives of HIV positive women in a qualitative study	N=8 HIV positive women who have had children after diagnosis (4 + 1 pregnant) or who have not had children but received diagnosis during childbearing years Aged 26-38 years	In-depth interviews	HIV was a barrier to motherhood for some women. Women were concerned about the risk of vertical transmission. Nevertheless, motherhood was an essential part of the identity of these women.

Author(s) and country	Aim of Study and Research Design	Sample Characteristics	Method	Relevant Findings
<i>Mental health conditions</i>				
Mowbray et al (1995) USA	To examine the context of parenting and the meaning of pregnancy and childbearing to women with serious mental illness	Recruited from variety of sources including advertisements in services and publications for HIV-positive women Computerised literature search on parenting and related experiences for women with a serious mental illness conducted for years 1983-1992	Literature review (36 studies)	Findings in research literature on parenting and women with serious mental illness are diverse. Many women with serious mental illness have unplanned pregnancies.
McGrath et al (1999) Australia	To determine the fertility and fecundity of individuals with psychoses, and to explore the interactions between age at first diagnosis and fertility in a cross-sectional study	N=342 Clients of 2 community health services and a psychiatric hospital	Interviews, questionnaire and chart review Comparison to Census data	Most women with psychoses were mothers. Patients with psychoses had fewer offspring compared to their unaffected same-sex siblings. Higher levels of fertility were associated with a later age at first diagnosis.
<i>Cancer</i>				
Schover (1999) USA	To review the impact of a history of cancer on survivors' attitudes, anxieties, and choices about having children of their own	No details provided for method used to select studies discussed in review	Literature review	Cancer had not influenced women's desire for children, and most participants definitely wanted to have children in the future. Survivors diagnosed in adolescence had the most anxieties about parenthood. Women were more distressed over infertility and more concerned about their children's health than men. Survivors who rated their overall quality of life more negatively were less concerned about infertility and more apt to decide to forego parenthood.

Author(s) and country	Aim of Study and Research Design	Sample Characteristics	Method	Relevant Findings
Schover et al. (1999) USA	To investigate cancer survivors' attitudes, emotions, and choices with regard to having children in a pilot study	N=132 (89 women and 43 men) All patients from the Cleveland Clinic Foundation tumour registry who were diagnosed before age 35 years, were age 18 years or older at the time of the survey, and were free of disease	Questionnaire (including SF-36)	Survivors of inheritable cancer syndromes had more distress about childbearing issues than other survivors. Survivors who do have children after treatment perceived them more positively than do parents who have not confronted cancer. 19% of the sample had significant anxiety that their cancer treatment could impact negatively on their children's future health. 18% of women feared that a pregnancy could trigger a cancer recurrence. SF-36 scores were very similar to normative data for healthy Americans of similar age. Majority of younger cancer survivors saw their cancer experience as potentially making them better parents. Those who were childless wanted to have children in the future.
Drew (2002) Australia	To explore psychosocial and socio-cultural aspects (e.g. fertility) of long term survival following cancer in childhood or adolescence	N=88 Males and females aged 18-28 years Recruited from CanTeen (a cancer support organisation for teenagers)	Questionnaire and open ended interviews	Most participants held fears about the possible effects of past cancer treatments on their fertility (but very few had reached the point of trying to conceive). Women expressed concerns regarding past cancer treatment and the health of the developing foetus. Women were also concerned about their health as gestating mothers; and about their partners and children if they should die prematurely. For women, motherhood was a key feature of self-concept and imagined future social role.
Langeveld et al. (2002) The Netherlands	To examine quality of life (including social functioning such as family) of young adult survivors of childhood cancer	Literature search using electronic databases such as MEDLINE, and reference lists of articles found	Literature review of 30 empirical studies published up to 2001 in English.	Cancer survivors had lower rates of marriage and parenthood than controls. Survivors worried about their reproductive capacity and/or about future health problems that their children might experience as a

Author(s) and country	Aim of Study and Research Design	Sample Characteristics	Method	Relevant Findings
Dow & Kuhn (2004) USA	To describe the impact of treatment on fertility, for women with breast cancer	Studies sourced from published research, clinical articles, book chapters and abstracts N=657 Women with breast cancer before age 40	Included studies conducted in the USA, Finland, UK, The Netherlands, Norway, Austria and Israel Literature review	result of their cancer history. Young breast cancer survivors were concerned about stimulating recurrence with subsequent pregnancy, health during pregnancy, and family matters.
Jancin (2004) USA	To investigate fertility issues in breast cancer patients in a cross-sectional study	N=657 Women with breast cancer before age 40 Members of the Young Survival Coalition	Internet survey	56% of patients reported wanting to have one or more children in the future at the time they were diagnosed with breast cancer. 57% of patients indicated they were concerned about becoming infertile after treatment. 29% said fertility concerns impacted their treatment decisions.
Zebrack et al. (2004) USA	To identify concerns, attitudes, and behaviours that may be associated with childhood cancer survivors' reproductive capacity in a qualitative exploratory study	N=32 childhood cancer survivors aged 19-37 years Recruited from a paediatric oncology practice	Semi-structured interviews	Most participants expressed a desire to have children in the future. Many mentioned concerns about their children having an increased risk for cancer or about passing on a genetic risk for cancer to their children. Some expressed concerns about not feeling physically fit to bear or raise children.
Madanat et al. (2008) Finland	To compare the fertility patterns of cancer survivors (post diagnosis) and their siblings in a population based setting	N=3,305 Cancer survivors Aged less than 35 years at diagnosis	Analysed data from Finnish Cancer Registry and Population Register Centre	Compared to siblings, both female and male cancer survivors were less likely to parent at least one child. Cancer survivors had anxiety and fears relating to reduction in overall fertility, possible pregnancy risks, as well as health effects in offspring.
<i>Cystic fibrosis</i>				
Fair et al. (2000)	To investigate attitudes to fertility issues in women with cystic fibrosis	N=79 women aged 16 years and over attending four	Postal questionnaire (70% response rate)	For 72% of women having children was important now or would be in the next 10 years. Parenting and fertility 'issues' were important for women with

Author(s) and country	Aim of Study and Research Design	Sample Characteristics	Method	Relevant Findings
Scotland		Scottish Cystic Fibrosis clinics		cystic fibrosis.
Boyd et al. (2004)	To evaluate the fertility and pregnancy outcomes of men and women with cystic fibrosis (CF) in a cross-sectional population based cohort study	N=4,659 (2141 women and 2518 men)	Analysed data from database	Few with CF had children. Few had sought infertility treatment.
UK		Women and men with cystic fibrosis on UK CF database (data collected from 56 CF clinics in UK)		Majority of pregnancies had a good outcome (67% live term birth among male partners, 74% among women).
<i>Multiple sclerosis</i>				
Smeltzer (2002)	To explore the decisions women with multiple sclerosis (MS) make about pregnancy and childbearing, and the factors which influence these decisions in a descriptive qualitative study	N=15 Pregnant women with MS Well educated white women aged 24-40 years	Interviews Content analysis	The unpredictability of MS and the effect that pregnancy might have on MS was important to women in the study. Diagnosis of MS affected women's previous plans for number of children as well as spacing of pregnancies. Women's major concerns were: about the pregnancy itself, including the decision to become pregnant; the effect of MS on future childbearing plans; labour and delivery concerns; concerns and issues related to breastfeeding; and concerns about the baby's wellbeing and child care.
USA		Recruited from MS newsletters and existing study		
<i>Rheumatoid arthritis</i>				
Katz (2006)	To investigate the childbearing decisions of women with rheumatoid arthritis	N=411 Married women with rheumatoid arthritis living in California	Structured telephone interviews	Most women reported that rheumatoid arthritis had affected their childbearing decisions. The aspects of rheumatoid arthritis or its treatment that most commonly affected childbearing decisions included concerns about being able to care for a child, medication issues (such as fears that medications would affect a baby and concerns about stopping medications), and fears of passing rheumatoid arthritis on to a child.
USA		Existing cohort of rheumatoid arthritis panel study conducted by the University of		

Author(s) and country	Aim of Study and Research Design	Sample Characteristics	Method	Relevant Findings
		<p>California</p> <p>Participants were a random sample of patients with rheumatoid arthritis attending selected rheumatologists</p>		<p>Although women with rheumatoid arthritis still had children, many reported that the diagnosis of rheumatoid arthritis had limited their family size.</p>

Although many women who have a health condition still want children, their health condition may restrict or influence their childbearing desires and outcomes in a number of ways. The treatment of health conditions may cause fertility problems (Schover et al. 1999, Drew 2002, Dow and Kuhn 2004, Jancin 2004); medications taken may not be indicated for use during pregnancy and women may have concerns about stopping medications (Katz 2006); health conditions may make a pregnancy difficult or cause pregnancy complications (Drew 2002); women may be concerned about how a pregnancy or motherhood would affect the course of their health condition (Schover et al. 1999, Fair et al. 2000, McDonald 2002a, Smeltzer 2002, Dow and Kuhn 2004), or the possible effects of their condition or its treatment on the wellbeing of their baby (Schover et al. 1999, Drew 2002, Langeveld et al. 2002, Dow and Kuhn 2004); if their condition could be transmitted to or inherited by their baby (Schover et al. 1999, Fair et al. 2000, Zebrack et al. 2004, Katz 2006); how their condition may affect caring for their baby (McDonald 2002a, Katz 2006); or if their condition may shorten their lifespan and their partners may be left to raise their children as single parents (Schover et al. 1999, Drew 2002, McDonald 2002a).

Health conditions may affect women's previous plans for the number of children they want and have. Smeltzer's (2002) exploratory qualitative study of reproductive decision-making in 15 women with multiple sclerosis (MS) found that the diagnosis of MS influenced women's prior plans for the number of children they wanted as well as the timing and spacing of their pregnancies. In particular, their childbearing plans were influenced by the time since their diagnosis of MS. Some women wanted to delay pregnancy until they knew what course their MS would take, while others did not want to wait and accelerated their childbearing. Several women also reduced the number of children they planned to have due to uncertainty regarding the course of their MS. Furthermore, some women spaced their pregnancies so that they would only have one young child in the home at a time that required attention and extensive physical care. Although participants in Katz's (2006) study of the childbearing decisions of women with rheumatoid arthritis still had children, many reported they had limited their family size as a result of their diagnosis.

Women with a chronic health condition also tend to desire and have fewer children than women in the general population. Chen et al. (2001) found that the proportion of HIV positive women in their study who desired a child in the future was lower than the overall proportion of US women who desired a child, and HIV positive women also expected to have fewer children than the whole population of US women. Madanat et al. (2008) examined post diagnosis parenthood among young Finnish cancer survivors compared with the fertility patterns of their siblings, and found that cancer survivors were less likely than their siblings to have parented at least one child.

McGrath et al. (1999) found that although many Australian women with psychoses are mothers, they tend to have fewer children than women in the general population. Yet Mowbray et al.'s (1995) review of parenting and related experiences for women with a serious mental illness reported inconsistent findings. Some studies indicated that birth rates for women with a serious mental illness were similar to those of women in the general population whilst others found that women with serious mental illness had a higher than average number of children. Mowbray et al. (1995) concluded that these diverse findings may be partly due to the methodological limitations inherent in the studies reviewed. The studies typically used small convenience samples, and the diagnostic criteria varied between studies. They suggested that more and better designed research was required.

The relationship between women's health, including both past illness and current health status, and their childbearing desires and outcomes has been under-investigated to date especially in the Australian context. It appears that the relationship between women's health and their childbearing desires and outcomes is complex and involves factors such as features of the health condition and the impact of treatment. However, most studies have examined the relationship of a single health condition to women's childbearing behaviour, and only a limited range of severe but rare medical conditions such as cancer and HIV have been investigated. There has been little comparison of women with different conditions with women in the general population. In addition, most studies conducted to date have recruited their participants from a single source such as a treatment centre (Schover et al. 1999), or an organisation related to the health condition (Drew 2002, Smeltzer 2002). Accordingly, these samples may be

unrepresentative of the general population. The relative importance of health factors in women's childbearing outcomes is also unknown.

3.4 CONCLUSION: GAPS IN UNDERSTANDING WOMEN'S CHILDBEARING OUTCOMES

In summary, empirical evidence indicates that women's childbearing outcomes are multifactorially determined. These include practical considerations such as the lack of a partner, disrupted relationships and age (Merlo 1995, Rowland 1998, Qu et al. 2000, Weston and Qu 2001a); 'lifestyle' issues such as a preference for the freedom of a life without children or a general lack of interest in parenting (Callan 1985, Callan 1986, Qu et al. 2000, Weston and Qu 2001b, Weston and Qu 2001a); employment concerns such as balancing paid employment with family responsibilities and job security (Summers 2003b, Maher et al. 2004, Weston et al. 2004); and economic factors such as the cost of raising children, which includes both the direct costs of food, health care, education and clothing, and indirect costs such as loss of income related to time out of the paid workforce caring for children (Callan 1985, Weston and Parker 2002, Summers 2003a, Weston et al. 2004).

However, a number of studies which have examined individual women's childbearing behaviour have focused only on the contribution of one factor to their childbearing outcomes. For example, Maher et al.'s (2004) investigation of the reproductive decision-making of women and men living in Victoria concentrated on the role of 'family friendly' benefits, policy and initiatives, such as paid maternity leave and part time work. Qu et al. (2000) considered the impact of Australian women's relationships and changes in their relationship status to their childbearing intentions and outcomes. As a result, even though a number of factors have been identified as significant in women's individual childbearing outcomes, little is known about their relative importance (Weston and Qu 2001b: 14, Weston and Parker 2002: 12, Gray et al. 2008).

Although multiple factors have been identified as contributing to women's childbearing outcomes, to date there has been inadequate exploration of the role of other variables of possible importance. In particular, few Australian studies have

investigated the role of attitudes toward women and motherhood; other psychosocial factors such as the influence of women's partners and significant others, concerns about population size, women's education debts, the accessibility of good quality and affordable child care, and housing conditions; and women's health. In addition, few Australian studies have examined whether the factors associated with childbearing differ for each additional parity progression.

Furthermore, although a range of theoretical explanations of fertility decision-making and low fertility have been proposed, as argued by Van Peer (2000: 4), this variety of perspectives indicates that there is currently no coherent theoretical basis for understanding fertility behaviour in low fertility populations.

In light of these findings, the purpose of this research project is to expand understanding of the factors which are salient in contemporary Australian women's childbearing outcomes in order to enhance theoretical explanations of fertility decision-making and low fertility, and to identify issues relevant to the development of policy which aims to address Australia's fertility rate and women's childbearing behaviour.

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4 RESEARCH DESIGN AND METHODS

4.1 AIMS AND HYPOTHESES

This study had three aims:

1. The first aim was to investigate the relative importance of a series of psychosocial factors (including attitudes toward women and motherhood, the influence of women's partners and significant others, women's education debts, concerns about population size, the accessibility of good quality and affordable child care, and housing conditions) and women's health to the childbearing outcomes of a representative sample of Victorian women of childbearing age.
2. To distinguish any differences in the contributing factors and their relative importance by parity.
3. To identify the childbearing desires and expectations of women aged 30-34 years including whether or not they want children, their ideal number of children, and their desire for and expectations of having children in the future.

Five hypotheses regarding women's childbearing desires, outcomes and expectations were tested in the study:

1. Women who have two or more children will be less likely to desire more children in the future than women with fewer or no children.
2. Women who have no children or only one child will be more likely to think that they will have a child in the future than women who have two or more children.
3. Women who have two or three children will be more satisfied with their current number of children than women with fewer or no children.

4. Women who hold more traditional attitudes toward women and motherhood will be more likely to desire greater numbers of children (Hypothesis 4a); be mothers (Hypothesis 4b), and have larger actual family sizes (Hypothesis 4c) than women with egalitarian attitudes after controlling for sociodemographic variables.
5. Women who have better a health status will be more likely to desire and have (more) children, and expect to have (more) children in the future than women with a poorer health status.

4.2 STUDY DESIGN

This study used a cross-sectional survey design in a population based sample of Australian women of childbearing age. Data were collected by anonymous self-administered postal questionnaire.

A cross-sectional survey design was chosen as the appropriate approach as it allowed data about the reproductive desires, expectations and outcomes of a representative subset of women aged 30-34 years at a defined time to be collected and described.

4.3 SAMPLING AND RECRUITMENT

Under provisions of the *Commonwealth Electoral Act 1918*, the Australian Electoral Commission can provide elector name, address, sex and age related information for use in research. The Australian Electoral Roll contains the names and addresses of Australian citizens aged 18 years and over, and is a regularly updated and near complete record of the Australian population. Australian Electoral Roll records have been used successfully to recruit representative samples in population based cross-sectional studies (Brownie 2006, Janus et al. 2007, Bartlett et al. 2008). Nonetheless, the use of the Australian Electoral Roll does exclude from selection women living in Australia who are not Australian citizens, Australian citizens living overseas and anyone else who is ineligible to vote. Despite these modest limitations, the Australian Electoral Roll provides an effective and efficient means of obtaining access to a representative sample of Australian women.

4.3.1 Study sample

Women aged 30-34 years have the highest fertility rate of all age groups in Australia (Australian Bureau of Statistics 2008c: 9). It was therefore presumed that most Australian women are making decisions about childbearing (or are having children) when they are aged between 30-34 years. This age range (30-34 years) was therefore chosen in order to obtain a sample of women who are of reproductive age, for whom childbearing decisions are salient, and a proportion of whom will already have children.

The sample was drawn from Victorian women aged 30-34 years randomly selected from the Australian Electoral Roll. The recruitment of women from the Electoral Roll was aimed at ensuring that the sample was representative of women of the same age group in the general population, and would therefore include mothers and women without children.

4.3.2 Sample size

The estimated total population of women aged 30-34 years in Victoria is 195,255 (Australian Bureau of Statistics 2003e). The sample size for the study was chosen so as to guarantee that the 95% confidence interval for a percentage estimate would have a width of, at most $\pm 5\%$, or a total width of 10%. The standard normal approximation then gives a required sample size of 384. This is a 'worst case' or conservative calculation: if an estimated percentage is different from 50%, the width of the 95% confidence interval will be narrower than $\pm 5\%$, conferring a more precise inference.

Return rates for postal questionnaires can be low, ranging from 13-60 percent (Asch et al. 1997, Lee 1999, Edwards et al. 2002). Recent Australian studies which have used anonymous postal questionnaires and obtained random samples from the Australian Electoral Roll have achieved response rates ranging from 28 to 36 percent (Runnion 2001, Bartlett et al. 2008). Based on an estimated return rate of 30 percent (which allowed for non response from women who are not proficient in reading and writing English, and questionnaires returned incomplete or returned due to incorrect addresses), the Australian Electoral Commission generated a random sample of 1280 names and addresses of women aged 30-34 years.

4.3.3 Sample recruitment

The Australian Electoral Commission randomly selected the sample from the Australian Electoral Roll using the sample size, sex and age range parameters nominated by the researcher. The resulting list of names and addresses was provided to the researcher. The elector extract was taken from elector backup at 31 March 2005, and electors' ages were calculated as at 5 April 2005. The elector extract excluded silent electors (electors who believe that having their address shown on the publicly available electoral roll could put their personal safety, or their family's safety, at risk), itinerant electors (electors who are in Australia but have no fixed address), eligible overseas electors, kin of eligible overseas electors and provisional electors awaiting citizenship. The extract included only electors from Victoria.

Two male electors were identified in the sample provided by the Australian Electoral Commission. The male electors were removed resulting in an elector extract of 1278 women.

4.3.4 Comparison populations

A variety of data sources were used to compare findings with women in the general population. These included data from the Australian Bureau of Statistics, the Victorian Perinatal Data Collection Unit, and large population based Australian studies such as the Australian Institute of Family Studies' Fertility Decision Making Project (Weston et al. 2004) and the Sex in Australia study (Smith et al. 2003a).

4.4 ETHICAL CONSIDERATIONS

The ethics of this project pertain to privacy, voluntary participation, risk of emotional distress and confidentiality. Under provisions of the *Commonwealth Electoral Act 1918*, the AEC can provide elector name, address, sex and age-range information for use in medical research and public health screening programs without being in breach of Privacy Principle (IPP) Number 11 which relates to the disclosure of personal information without the person's consent (Australian Electoral Commission 2002).

The personal information which was obtained from the Australian Electoral Commission (AEC) was elector name and address details only. This information

enabled the researcher to send a personalised letter to each address selected and was not used for any other purpose. The researcher signed an agreement with the Australian Electoral Commission, before the elector information was provided, protecting the data from any unauthorised use.

Details of how names and addresses were obtained were described in the plain language statement. A statement that the AEC provided name, address, gender and age-range information for this study in conformity with Item 2 of subsection 90B(4) of the *Commonwealth Electoral Act 1918* and sub regulation 10(1) of the *Electoral and Referendum Regulations 1940* was included.

Participation in the research project was voluntary. Anonymity of the participants was preserved. The researcher did not know the identity of respondents. When posted to the potential participants the questionnaires did not contain any identifying code. Participants were asked not to write their names on the questionnaire. An identification number was only assigned to each completed questionnaire on its return to the researcher. The number enabled each questionnaire in the data set to be identified. The results of the project are reported as group data only and no individual information is identifiable. Return of the completed questionnaire was taken as informed consent to participate.

It was considered extremely unlikely that completion of the questionnaire would put the participants at greater risk than those encountered in everyday life or that the issues raised in the questionnaire would be emotionally arousing. The only inconvenience to participants was the time involved in completing the questionnaire. However, it was recognised that memories of adverse past experiences could inadvertently be triggered by answering questions about childbearing experiences and outcomes. The plain language statement stated that in the event that participants became distressed, Principal Supervisor and registered Clinical Psychologist Associate Professor Fisher (contact details were provided on both the plain language statement and the questionnaire) would discuss possible sources of assistance with them. The phone numbers of Relationships Australia (a relationship support service) and Lifeline (a free 24 hour counselling service) were also provided.

The participants were advised in the plain language statement that if they had any concerns regarding the conduct of the research project they could contact the University of Melbourne's Human Research Ethics Committee, or if they had any concerns regarding the use of personal information by Commonwealth agencies for the purpose of research they could contact the Federal Privacy Commissioner. The contact details for both of these bodies were provided in the plain language statement.

The data from this project were stored according to University of Melbourne guidelines in locked facilities at the Centre for Women's Health, Gender and Society (formerly the Key Centre for Women's Health in Society) at the University of Melbourne. All computer files were password protected and accessible only by the researcher. The data will be kept for a minimum of five years from the date of the last publication arising from the research. After that any paper records will be shredded and the computer records deleted. Disposal of the CD-ROM which contained the names and addresses of the potential participants obtained from the Australian Electoral Commission was in accordance with the Archives Act 1983 as specified in the Guidelines Under Section 95 of the Privacy Act 1988, and was undertaken after the questionnaires and reminder letters had been mailed.

Ethics approval for this research project was granted by the Health Sciences Human Ethics Subcommittee of the University of Melbourne (HREC No. 050023, February 2005).

4.5 MATERIALS

4.5.1 Postal questionnaire

A self administered anonymous postal questionnaire was used as the data collection method as it allowed a large geographically diverse population to be surveyed, and enabled the study to be conducted over a short time frame with relatively low administration costs (Cartwright 1988: 172, Oppenheim 1992: 102, Salant and Dillman 1994: 36, Alreck and Settle 1995: 34, Bowling 1997: 230, Peat et al. 2001: 116, Kavanagh et al. 2002: 340).

4.5.2 Questionnaire design and development

The self report questionnaire, developed by the candidate specifically for this study, was informed by a review of the existing Australian and international literature, and previous studies of fertility decision-making, desires, outcomes and expectations including the Australian Institute of Family Studies' 1981 Australian Family Formation Study and the 1996 Australian Life Course Study (Weston and Qu 2001b).

The questionnaire consisted of forty-three questions which assessed participants' sociodemographic characteristics; attitudes toward women and motherhood; previous reproductive experiences, current and future childbearing desires (that is, whether or not they wanted children now or in the future, and their ideal number of children) and future childbearing expectations (that is, the likelihood of them having children in the future); the importance of a range of psychosocial and health factors in their childbearing outcomes (by parity); and past history of health problems and current health status. Most items were in fixed choice response format. Many included an 'other' response option (with a blank line so participants could be specific) so that participants were not limited by the range of response items offered. Space was also provided for participants to add their own comments. There were a small number of open ended questions. A blank page was included at the end of the questionnaire for participants to provide additional comments should they wish to. This allowed participants to outline any other issues that they felt may be relevant or important, or ones which were not captured by the fixed choice response options.

The design of the questionnaire was aimed at ease of reading, comprehension and completion; and relevance to the target population. It was estimated that the questionnaire would take no longer than 30 minutes to complete.

4.5.2.1 Attitudes toward women and motherhood scale

In the absence of an existing reliable, valid and acceptable measure which could be used in its entirety to measure contemporary Australian women's attitudes toward women and motherhood, a more suitable scale was developed.

The measure was designed to ascertain the spectrum of traditional to egalitarian attitudes regarding women and motherhood in contemporary Australian women.

Women with traditional attitudes regard motherhood as central to their lives and identity whilst women with egalitarian attitudes view motherhood as only one part of their lives and identity (Kaufman 2000: 131). A pool of items (n=20) was formed which represented several dimensions of attitudes toward women and motherhood including maternal employment; the division of child care and household responsibilities between women and men; women's equality with men; the ideology of motherhood; and women's reproductive freedom.

Items were drawn from two sources. First, items were selected or modified from a review of items in existing relevant measures (for example, Brogan and Kuttner 1976, Dreyer et al. 1981, Hare-Mustin et al. 1983), sourced from searches of the Web and a literature search of peer reviewed journal papers (and their reference lists) written in English. Two items were used as originally written. Seven existing items were modified in order to make them more acceptable and relevant to contemporary Australian research participants (for example, the terms 'wife' and 'husband' were changed to 'partner') or to clarify their intention (for example, the term 'working mother' was changed to 'mother with a paid job'). Second, eleven original items were written to reflect aspects of attitudes toward women and motherhood identified as salient in the contemporary literature and Australian print media. The items and their origin are listed in Table 4.1.

Table 4.1 Draft Attitudes toward Women and Motherhood Scale (20 items)

Item No.	Item	Scale					Item Source
		Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	
1	These are some statements about women in Australia (in general) today. How much do you agree or disagree with each of these statements?						
1a	Women in Australia are viewed more favourably if they have children	1	2	3	4	5	New – developed from a review of contemporary Australian literature and print media
1b	<i>Women in Australia are able to have both a career and children</i>	1	2	3	4	5	New – source: as for item 1a
1c	Women in Australia are under pressure to have children	1	2	3	4	5	New – source: as for item 1a
1d	Motherhood is valued in Australia	1	2	3	4	5	New – source: as for item 1a
1e	<i>Motherhood is just one possible option for women in Australia today</i>	1	2	3	4	5	New – source: as for item 1a
2	These are some statements about roles, responsibilities and expectations of women. How much do you agree or disagree with each of these statements? I think that ...						
2a	Whatever career a woman may have, her most important role in life is still that of being a mother	1	2	3	4	5	New - developed from a review of contemporary literature
2b	<i>It is OK for a woman to have a career and her partner to care for their children</i>	1	2	3	4	5	Modified from Item 33 Brogan & Kuttner (1976): item direction changed from traditional to egalitarian
2c	A man should earn more than his partner	1	2	3	4	5	Modified from Item 2 White & Kim (1987): ‘wife’ changed to ‘partner’
2d	<i>If both partners in a couple have paid jobs, they should share the housework and care of children equally</i>	1	2	3	4	5	Modified from Item 4 White & Kim (1987): ‘working’ changed to ‘paid job’
2e	Higher education is more important for men than women	1	2	3	4	5	Modified from Item 9 Spence & Hahn (1997)

Item No.	Item	Scale	Item Source
2f	<i>A mother who has a paid job can have as good a relationship with her children as a mother who does not work outside of the home</i>	3	Modified from Item 6 White & Kim (1987) & Item 11 Dreyer et al. (1981): 'working mother' changed to 'mother with a paid job'
2g	A woman should be married before she has children	3	New - developed from a review of contemporary literature
2h	<i>It is OK for women with young children to work outside the home</i>	3	Modified from Item 9 Kerr & Holden (1996): added 'young' to 'children' & deleted 'if doesn't have to financially'
3	These are some statements about women and motherhood. How much do you agree or disagree with each of these statements? I think that ...		
3a	A woman is not a 'real woman' until she becomes a mother	3	New - developed from a review of contemporary literature
3b	<i>A woman can live a full and happy life without ever having children</i>	3	New - developed from a review of contemporary literature
3c	A woman who doesn't want children is unnatural	3	Item 4 Hare-Mustin et al. (1983)
3d	<i>Having children is a small part of being a woman</i>	3	Modified from Baber and Dreyer (Baber and Dreyer 1986: 506): 'raising a family' changed to 'having children'
3e	It is selfish not to want children	3	Item 10 Hare-Mustin et al. (1983)
3f	<i>Women should be able to decide if and when they have children</i>	3	New - developed from a review of contemporary literature
3g	<i>It is OK for a woman to choose not to have children</i>	3	New - developed from a review of contemporary literature

Note: reversed items are shown in italics.

Social desirability response bias is common in questionnaires with sensitive questions or questions about social norms. Participants may adjust their answers in order to appear socially acceptable. Socially desirable responding may confound results by creating false relationships or obscuring relationships between variables. Social desirability scales can be used to detect, minimise, and correct for socially desirable responding in order to improve the validity of questionnaire based research (van de Mortel 2008). No specific measure of social desirability response bias was included in the questionnaire. However, the development of the scale attempted to minimise any social desirability response bias by the use of the anonymity of participants, reversed items, a scale which was self administered, and instructions to participants which stated that the researcher was interested in their views and there were no right or wrong answers. Participants were asked to complete all items and to choose the option of best fit for any item to which they did not have a definite response.

4.5.2.2 Pilot testing of the questionnaire

The draft questionnaire was pilot-tested for acceptability and comprehensibility. Ten women identified through convenience and snowball sampling volunteered to read and provide feedback on the draft questionnaire. The women were aged between 30-39 years. Two of the women had no children, two women were pregnant with their first child, two had one child, and four had two children each. The children were aged between 10 months and six years. Eight of the women had completed a university degree (including two women with postgraduate qualifications), and two women had no post secondary school qualifications. The women were given a brief background to the proposed project, asked to read the questionnaire, and provide feedback and comments on it, but not their personal responses.

Overall, the feedback from the draft questionnaire was positive. The women felt the experiences being asked about were interesting and pertinent to their current stage of life; that they would complete the questionnaire if they received it in the mail; and many asked if they could participate in the actual research project and complete the final questionnaire. The women thought the instructions and wording in the questionnaire were straightforward and easy to understand; and that none of the

questions were too sensitive or distressing. Although the questionnaire looked long it was judged not to be too long. They estimated it would take approximately 30-40 minutes to complete. Many of the women remarked that if they did receive such a questionnaire in the mail they would want to know how their results would be used. The women also suggested specific improvements to the wording, layout of questions and the inclusion of other factors which may be important in women's childbearing outcomes which had been omitted in the draft questionnaire.

The draft questionnaire was discussed in a group supervision meeting with postgraduate students at the Key Centre for Women's Health in Society supervised by Associate Professor Fisher and Dr Rowe. Each question was considered in terms of its relevance, clarity, suitability of the language used, and its design. The discussion also identified other factors which were not included in the draft questionnaire but were relevant to the aim of the project. The instructions for completing the questionnaire were also assessed for their simplicity and comprehensibility.

Members of the researcher's PhD confirmation committee also provided suggested improvements to the design of the questions, and further issues for inclusion.

The feedback from all sources was utilised to make modifications to the draft questionnaire. Questions that were identified as difficult to understand or ambiguous were reworded or redesigned; questions identified as unnecessary were removed; the range of responses in the fixed choice questions were modified to ensure they were unambiguous; and questions about other factors that were identified as being important were added.

4.5.3 Final questionnaire

The questionnaire had forty-three questions in total and was divided into four sections: sociodemographic data; attitudes toward women and motherhood; reproductive experiences, and childbearing desires, outcomes and expectations; and past and current health and wellbeing.

4.5.3.1 Sociodemographic characteristics

The characteristics assessed were participants': age, highest level of education, marital status, current living arrangements, residential postcode, current main occupation (this question assessed both paid and unpaid work; and if participants were in paid employment, how many hours per week they worked), number of siblings, birth order in family of origin, country of birth and ethnic origin (assessed as parents' country of birth), religious affiliation, importance of religion in daily life, and sexual orientation.

4.5.3.2 Attitudes toward women and motherhood

The Attitudes toward Women and Motherhood Scale was designed to sample attitudes about the roles, responsibilities and expectations of women, in particular those pertaining to motherhood; and differentiate women with egalitarian attitudes toward women and motherhood from women with more traditional attitudes.

4.5.3.3 Reproductive experiences; and childbearing desires, outcomes and expectations

Study specific questions assessed reproductive experiences; childbearing desires and expectations; and psychosocial and health factors important in childbearing outcomes. These questions asked about participants' reproductive history (including adopted, step and foster children, live births, premature births, miscarriages, abortions, caesarean births); age at first birth; fertility status; current contraceptive use; childbearing desires; childbearing expectations such as desire and likelihood of having a child or more children in the future; and level of satisfaction with current number of children or the decision not to have children.

The questionnaire assessed factors that have been identified in previous research and others identified by the researcher as important in childbearing outcomes including relationship status; partner's desires; interest in children and motherhood; financial concerns (such as the cost of raising children); employment concerns (such as difficulties balancing family responsibilities with paid work or achieving career goals before having children or further children); 'lifestyle' preferences (such as being able to travel or giving up freedom to have children); child care accessibility and

affordability; educational goals and debts; housing concerns and aspirations; age (including being the right age to have children or feeling too young to have children or still thinking there is plenty of time to have children); and the influence of any health conditions including treatments which have caused fertility problems, medication contraindicated for use during pregnancy, and inherited health conditions.

The use of the word 'decision' was minimised in the questionnaire in order not to discourage women who may not have had a 'choice' about having or not having children from completing the questionnaire.

Participants were asked to rate, on a five-point Likert scale of 'very important' (1) to 'not at all important' (5), how important each factor was in their childbearing outcomes. Listed separately in the questionnaire were: 50 items of possible importance in not currently having children; 37 items possibly important in having the first child, 40 items of possible importance in having subsequent children, and 25 items likely to be important in having or not having children in the future. The number of items in the lists of psychosocial and health factors differed for each parity in order to reflect the various factors of possible importance identified in the existing literature. Some of these factors have been identified as specific to certain parities. For example, the desire to have a second child so that the first child will not be an only child.

4.5.3.4 Past and current health and wellbeing

Data on participants' lifetime and current health status were collected. The questionnaire assessed history of medical illness by asking participants to identify from a list any health conditions they had been diagnosed with or treated for in their lifetime such as diabetes, heart disease, depression, sexually transmitted infections, eating disorders, substance abuse, cancer and infertility.

Participants' recent health service utilisation was also measured. Participants were asked to report on a six point scale ranging from 'none' (0) to 'nine or more' (5) the number of times in the past twelve months that they had consulted a list of seven health practitioners including general practitioners, hospital doctors, allied health

professionals and sexual health services, and had been admitted to hospital for their own health (excluding pregnancy and childbirth).

4.5.4 Standardised psychometric measures

The questionnaire incorporated three standardised, validated, psychometric instruments to assess current health and wellbeing, and life satisfaction: the SF-12v2 (Medical Outcomes Trust 2002), the Personal Wellbeing Index (Australian Centre on Quality of Life 2004b) and the Satisfaction With Life Scale (Diener et al. 1985).

4.5.4.1 SF-12v2

The SF-12v2 (Medical Outcomes Trust 2002) was used to assess the participants' general health status. The SF-12v2 is a self reported multidimensional measure of general health status and health related quality of life. The SF-12v2 consists of 12 questions which use five fixed choice response scales and produce two distinct summary measures representing physical and mental health, the Physical Component Summary (PCS-12) and the Mental Component Summary (MCS-12). The standard version of the SF-12v2 which incorporates a four week recall period was used.

There are no normative Australian data available for the SF-12v2. Therefore, the sample's results were compared to US normative data. Nevertheless, the SF-12v1 has been used extensively in the Australian population, for example, the National Survey of Mental Health and Wellbeing (Australian Bureau of Statistics 1997b) and the Victorian Burden of Disease Study (Department of Human Services (Public Health Division) 1999), and has been shown to be a valid measure of general health status among Australians (Andrews 2002a, Sanderson and Andrews 2002). Despite the lack of normative Australian data for SF-12v2, it was decided to use this version instead of SF-12v1 due to the improvements made to Version 2 including less ambiguous wording and five level response choices instead of dichotomous response choices.

Estimates of reliability for the SF-12v2 summary scores are $\alpha = 0.89$ (PCS-12) and $\alpha = 0.86$ (MCS-12) (Ware et al. 2002).

4.5.4.2 Satisfaction With Life Scale

Diener et al.'s (1985) Satisfaction With Life Scale (SWLS) was used to measure the participants' life satisfaction. However, in order to make the scale consistent with others in the questionnaire, a five-point Likert scale of 'strongly agree' (5) to 'strongly disagree' (1) was used instead of Diener et al.'s (1985) original seven point scale. Possible scores ranged from 5 to 25. High scores indicate more satisfaction with life. Comparative SWLS Australian data for women are available (for example, Saunders and Roy 1999).

In the validation study the SWLS demonstrated good internal consistency (Cronbach alpha coefficient = 0.87) and the two-month test-retest reliability was 0.82 (Diener et al. 1985).

4.5.4.3 Personal Wellbeing Index

The Personal Wellbeing Index (PWI) is a measure of subjective quality of life. The PWI was selected for use as it provides a measure of global emotional wellbeing, and is consistent with the World Health Organisation's (2008) broad definition of mental health as a 'state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community' which emphasises emotional wellbeing not just the absence of mental disorders.

The PWI measures the average level of satisfaction across seven aspects of personal life: health, personal relationships, safety, standard of living, achievements, community belonging, and future security. It consists of seven items which are answered on an 11 point, end-defined scale anchored by 'completely dissatisfied' and 'completely satisfied'. Each item is scored from 0 (completely dissatisfied) to 10 (completely satisfied). The seven item scores are standardised into units of a 0 to 100 point distribution. This is achieved by shifting the decimal point one step to the right (for example, a value of 6.0 becomes 60 points). The domain scores are aggregated and averaged to form the Personal Wellbeing Index which constitutes a measure of subjective wellbeing (International Wellbeing Group 2005).

The PWI is a reliable, valid and sensitive instrument (Cummins 2002, International Wellbeing Group 2005). It has good internal consistency, with a Cronbach alpha coefficient reported of between 0.70 and 0.85 in Australia and overseas (International Wellbeing Group 2005: 9). Approval to use the Personal Wellbeing Index in this research project was given by Professor Bob Cummins of the Australian Centre on Quality of Life, Deakin University (pers. comm., 21 July 2004).

The Personal Wellbeing Index (PWI) has been used in the Australian context, for example, the Australian Unity Wellbeing Index Surveys (Australian Centre on Quality of Life 2004a). Normative Australian data (including gender and age data) are available from the Australian Centre on Quality of Life (2005).

4.6 PROCEDURES

The initial mail out to potential participants included the questionnaire, cover letter, plain language statement and summary of results form. Questionnaires (Appendix 1) with a covering letter (Appendix 2) describing the study and invitation to participate were mailed in May 2005 to all names and addresses provided by the Australian Electoral Commission. To maximise response, the letter was printed on University of Melbourne and Key Centre for Women's Health in Society letterhead and outlined how potential participants were selected (Oppenheim 1992: 104). A plain language statement (Appendix 3) was included describing the purpose of the study, what participation would involve, and explaining that completion and return of the questionnaire implied informed consent to participate. A summary of results form (Appendix 4) was also included to enable participants to receive participant newsletters outlining the results of the study if desired. A separate reply paid envelope was provided for the return of the summary of results form (in addition to that provided for the return of the questionnaire) to ensure participants' names and contact details could not be associated with their questionnaire.

In order to increase the response rate, a reminder letter (Appendix 6) was sent to all potential participants three weeks after the initial posting (Asch et al. 1997: 1132, Gore-Felton et al. 2002: 166). No further correspondence was sent after the reminder letter.

Participation involved anonymous completion of the questionnaire and its return to the researchers in a reply paid envelope.

Participant newsletters were posted or emailed in January 2006 and March 2008 to participants who had provided their contact details for this purpose (Appendix 5).

4.7 DATA MANAGEMENT AND ANALYSIS

4.7.1 Data management

The quantitative data were coded, entered and analysed using SPSS for Windows (Version 15). Qualitative comments from participants were transcribed to Word files (Microsoft Office Word 2003).

4.7.2 Coding and scoring

Quantitative responses were coded, scored and entered into SPSS as nominal, ordinal or interval variables as appropriate. Qualitative comments volunteered by participants were transcribed and grouped by subject matter.

4.7.2.1 Sociodemographic details

Participants' ages were entered in years. Marital status was classified as married, de facto (opposite sex and same sex), separated, divorced, widowed or never married. Highest level of completed education was coded as no post secondary school qualification, non degree qualification, or bachelor degree and above. Participants' residential postcodes were recorded and classified according to the Australian Standard Geographical Classification (ASGC) as major city, inner regional, outer regional or remote (Australian Bureau of Statistics 2004a).

Socioeconomic status was assessed by scoring participants' residential postcode according to the Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-Economic Advantage/Disadvantage (IRSAD) (Australian Bureau of Statistics 2003h). A higher score on the IRSAD indicates that an area has attributes such as a relatively high proportion of people with high incomes or a skilled workforce. Conversely, a low score on the index indicates that an area has a higher proportion of individuals with low incomes, more employees in unskilled occupations, and a low proportion of

people with high incomes or in skilled occupations. Areas with mid-range index values tend to contain a broader mix of people and households (Australian Bureau of Statistics 2003b: 4 & 19). Victorian IRSAD quintile index values (Australian Bureau of Statistics 2003h) were used to classify the participants' residential postcode into areas of advantage and disadvantage. 'Areas of most advantage' = $\geq 80\%$ quintile (≥ 1048.9), 'advantaged areas' = 60%-80% (988-1048.8), 'middle areas' = 40%-60% (955-987), 'disadvantaged areas' = 20%-40% (928-954) and 'areas of most disadvantage' = $\leq 20\%$ quintile (≤ 927).

Current housing was categorised as a house or flat owned or being purchased, rental accommodation, or other including being a boarder or lodger. Living arrangements were classified as living with partner/children, lone parent, group household, or living alone.

Employment status was categorised as in paid employment or not in paid employment. Number of hours of paid employment per week were recorded, and categorised as full time (35 hours per week or more) or part time (fewer than 35 hours per week). Occupations were classified according to the nine categories of the Australian Standard Classification of Occupations (ASCO) (Australian Bureau of Statistics 1997a): Managers and administrators; Professionals; Associate professionals; Tradespersons and related workers; Advanced clerical and service workers; Intermediate clerical, sales and service workers; Intermediate production and transport workers; Elementary clerical, sales and service workers; and Labourers and related workers. Unpaid labour was classified as full time care for children at home, student, unemployed, full time carer for elderly or ill relatives, or unable to work due to sickness or injury.

Country of birth was coded according to the Standard Classification for Countries (Australian Bureau of Statistics 2003a) as Australia, Oceania, Europe, Africa, the Middle East, Asia or the Americas. For participants born overseas, the length of residence in Australia was recorded in years. Ethnic origin was classified according to parents' country of birth and coded as mother/father born in Australia or overseas. Aboriginal or Torres Strait Islander origin was classified as Aboriginal, Torres Strait Islander or neither.

Religious groups were classified according to the Australian Standard Classification of Religious Groups (ASCRG) (Australian Bureau of Statistics 1996a) as Buddhist, Christian, Hindu, Jewish, Muslim, Other, or No religious affiliation. Importance of religion in daily life was entered as a categorical variable (very important, important, neither important or unimportant, unimportant or not at all important).

Sexual orientation was classified as heterosexual, lesbian or bisexual. The number of siblings was recorded, and birth order in family of origin was coded as eldest, middle or youngest child.

Based on their distributions, for some analyses (for example, hierarchical multiple regression) data were reduced by dichotomising responses to questions with three to eight ordinal response alternatives. Employment status was coded as unemployed and employed (paid), religious affiliation (not affiliated with a religion and affiliated with a religion), highest level of education achieved (no post secondary school qualification and post secondary school qualification), place of residence (regional or remote and major city) and socioeconomic status (live in an area of socioeconomic disadvantage and live in an area of socioeconomic advantage). Victorian SEIFA IRSAD quintile index values were used to categorise participants' postcodes into areas of advantage ($> 40\%$ quintile) and disadvantage ($\leq 40\%$ quintile) (Australian Bureau of Statistics 2003h).

4.7.2.2 Attitudes toward women and motherhood

Responses to the Attitudes toward Women and Motherhood Scale were scored as a continuous variable. Items were reverse scored as appropriate and total scores were computed. Total scores were not calculated for participants with any missing data.

4.7.2.3 Reproductive experiences, and childbearing desires and expectations

For the purposes of this study, a mother was defined as a woman who had given birth to a child or was pregnant with her first child. Motherhood status was coded as: not a mother and mother. The number of children ever born to participants was recorded. Depending on the analysis, parity was either coded as a categorical variable: '0 children', '1 child (or pregnant with first child)', or 'two children or more (or pregnant with second child)'; or a continuous variable (number of children ever born

including current pregnancies). The numbers of adopted children, fostered children, step children, live births, live premature births, still births, miscarriages, abortions due to foetal abnormalities, abortions for other reasons, and caesarean births were recorded.

The ages of participants' children, participants' age at first birth or desired age at first birth, or when she decided not to have children were recorded in years. The age at first birth was classified into: ≤ 19 years, 20-24 years, 25-29 years and 30-34 years. Age decided not to have children was classified into: ≤ 12 years, 12-19 years, 20-29 years and ≥ 30 years.

Current pregnancy status was entered as a categorical variable: 'yes', 'no' or 'I don't know'. For pregnant participants, the current pregnancy was classified as: first pregnancy, second pregnancy, third pregnancy, fourth pregnancy, fifth pregnancy or sixth pregnancy. Current contraceptive use was recorded as 'yes, currently using contraception', 'no, not currently using contraception' or 'I don't want to answer'. The reasons for non use were entered as a categorical variable: 'I am pregnant', 'I have recently had a baby', 'I am actively trying to become pregnant', 'I can't have children', 'My partner can't have children', 'I currently have no male sexual partner', 'I'm not really trying to become pregnant but wouldn't mind if I did', or 'Other'. Fertility status was categorised as: have tried unsuccessfully to get pregnant for twelve months or more but have not sought help or treatment; have sought treatment for diagnosed female infertility; have sought treatment for diagnosed male infertility; never tried to get pregnant; or had no problem with fertility.

Current desires about having children were coded as: want children; ambivalent about having children; had no control over decision to have or not have children; or definitely do not want to have children. Participants' ideal number of children was recorded. Depending on the analysis, ideal number of children was either coded as a categorical variable (no children, 1-3 children or ≥ 4 children) or treated as a continuous variable. Participants' level of satisfaction with their current number of children was recorded on a ten point scale ranging from 'completely dissatisfied' (1) to 'completely satisfied' (10). Desire to have more children in the future was recorded on a ten point scale ranging from 'definitely don't want a(nother) child' (1) to

‘definitely want a(nother) child’ (10). Likelihood of having more children in the future was scored on a ten point scale ranging from ‘very unlikely’ (1) to ‘very likely’ (10).

4.7.2.4 Childbearing outcomes

The importance to participants of the various psychosocial and health factors listed in the questionnaire in participants’ childbearing outcomes were scored on five point scales ranging from ‘very important’ (1) to ‘not at all important’ (5).

4.7.2.5 Pressure from others in childbearing behaviour

The amount of pressure participants felt from significant others to have children was scored on a three point scale: ‘a lot’ (1), ‘a little’ (2) and ‘none’ (3). A ‘pressure score’ was calculated for each individual significant other. These scores were then averaged to obtain a total pressure score for each participant.

4.7.2.6 Health status

Responses to the standardised health, life satisfaction and personal wellbeing measures were entered. Items were scored as appropriate and subscale and total scores were computed. Cases with missing data were excluded only if they were missing data required for the specific analysis.

The SF-12v2 is scored by entering the data, recoding out of range values as missing, reverse scoring and/or recalibrating the required four items, computing raw scale scores, and transforming raw scale scores to a 0-100 scale (Ware et al. 2002). A high score indicates a better health state.

The five-point Likert scale used in this study to measure life satisfaction differed from Diener et al.’s (1985) seven point scale. In order to compare the life satisfaction of the participants with women of a similar age in the general population, the life satisfaction scores were converted to seven point equivalency using a rescaling method shown to result in comparable data (Dawes 2008). The end points of the five point scale were anchored to the seven point scale, and the scale values were treated as if they were equal-interval.

Three additional life satisfaction items (satisfaction with relationship with partner, being a mother and relationship with children) were asked in addition to the Satisfaction With Life Scale and the Personal Wellbeing Index (PWI). These items used the same 10 point scale as the PWI ranging from ‘completely dissatisfied’ (0) to ‘completely satisfied’ (10). High scores indicate greater satisfaction.

Details of health conditions diagnosed with or treated for were recorded. Health conditions were classified according to the International Classification of Diseases (ICD-10) (Australian Bureau of Statistics 2003d). Health service utilisation was scored on a six point scale ranging from ‘no consultations’ (0) to ‘9 or more’ (5) for each of the health practitioners listed.

4.7.3 Data analysis

The primary aim of the study was to identify the factors which are important in women’s childbearing outcomes, assess their relative importance and compare these factors by parity. To address this aim salient factors were identified and women of different parities compared.

All continuous data were assessed for normality. The attitudes toward women and motherhood (skewness= -0.22); the level of satisfaction with current number of children (skewness= -0.4); and the amount of pressure from others to have children (skewness= -1.46) scores were negatively skewed; and future childbearing desires (skewness= 0.6) scores were positively skewed. Despite the skewed data, parametric statistics were deemed appropriate given the large sample size, the robustness of parametric statistics, and that histograms and normal q-q plots of the scores indicated only minor violations of normality (Tabachnick and Fidell 2001: 74, Pallant 2005: 103). Further, transformation of these variables did not improve skewness.

A significance level of .05 was used for all statistical tests unless otherwise stated. As recommended by Pallant (2005: 53), the ‘exclude cases pairwise’ option in SPSS was used for missing values. This option excludes the case only if it is missing the data required for the specific analysis.

4.7.3.1 Descriptive data

Descriptive statistics were used to summarise and describe the data. Frequencies and proportions in percentages were used to describe the range of nominal and ordinal questionnaire responses. For continuous variables, mean, standard deviation, range and 95% confidence intervals (95% CI) were calculated.

Comparisons were made by motherhood status (that is, between mothers and childless women) and parity (that is, between childless women, women with one child or pregnant with their first child, and women with two or more children or pregnant with their second child).

4.7.3.2 Univariate measures of association

The main outcomes were motherhood status and parity. Factors thought to influence variation in the outcomes were tested using univariate measures of association. The t-test was used to test for differences between two group means, Pearson's correlation to test for associations between continuous variables, and the chi-square test to measure between group differences in categorical variables.

One-sample t-tests were used to compare the sociodemographic characteristics and reproductive experiences of the participants with women of the same age in the general population, and on standardised tests where appropriate.

4.7.3.3 Analysis of variance

One-way between groups analyses of variance were conducted to explore differences by parity and childbearing desires for dependent continuous variables.

In order to reduce the risk of a Type 1 error, multivariate analysis of variance (MANOVA) was used to compare mothers and childless women on a range of different characteristics. Prior to conducting MANOVAs the data was tested for the appropriate assumptions regarding sample size, normality and outliers. The data conformed to the assumptions apart from minor violations of normality. However, according to Tabachnick and Fidell (2001: 329) a 'large' sample size ensures that MANOVA is able to accommodate minor departures from normal distribution.

4.7.3.4 Principal components analysis

Principal components analysis (PCA) with Varimax rotation was used to reduce the number of variables into conceptually meaningful and statistically independent smaller sets that specified the psychosocial and health factors which contributed to women's childbearing outcomes. A separate PCA was conducted for each of the following: the factors important in women currently not having children, having their first child, having subsequent children after their first child, and likely to be important in future childbearing decisions. The components identified by the PCAs were named to reflect the variables loading onto that component.

A mean score was calculated for the individual components identified in each PCA using participants' responses to the items that loaded onto the component. As a result, the mean score was meaningful in terms of the five-point Likert importance scale used in the childbearing outcome questions. A series of paired t-tests using the component mean scores were then conducted to determine the relative importance of each component in childbearing outcomes.

The underlying factor structure of the Attitudes toward Women and Motherhood Scale was also investigated using principal components analysis (PCA) with Varimax rotation.

Prior to performing the PCAs the suitability of data for factor analysis were assessed through: inspection of the correlation matrix for evidence of coefficients greater than 0.3, the Kaiser-Meyer-Olkin measure of sampling adequacy (Kaiser 1970, Kaiser 1974), and Bartlett's Test of Sphericity (Bartlett 1954). Three techniques were used to assist decision-making concerning the number of factors to retain. These were: Kaiser's criterion - factors with an eigenvalue of 1.0 or more were retained for further investigation; scree tests - as per Catell's (1966) recommendation factors above the 'elbow' in the plot were retained; and parallel analyses in which the size of the eigenvalues were compared with those obtained from a randomly generated data set of the same size (Watkins 2001).

4.7.3.5 Regression analyses

A binary logistic regression analysis was conducted to examine the relationship between participants' motherhood status (dependent variable) and attitudes toward women and motherhood (independent variable). Motherhood status, defined as whether the participant was a mother or not, was coded as a binary variable (0 = not mother and 1 = mother). Sociodemographic characteristics (independent variables) found to be correlated with motherhood status were entered as the first block in the model.

Regression coefficients (non-standardised, Beta) are presented, as well as odds ratios (OR), including a 95% confidence interval, and p-values. The significance of the total model is reported as Chi Square, with corresponding p-value.

Hierarchical multiple regression analyses were used to examine the relationship between participants' attitudes toward women and motherhood (independent variable) and ideal number of children and parity (dependent variables) while controlling for sociodemographic characteristics (independent variables) associated with the dependent variable. Ideal number of children and parity were both coded as continuous variables. The analyses including ideal number of children were not restricted to women who were mothers as only 20 participants (3.5%) definitely did not want to have children.

The relationship between pressure from others (dependent variable) and motherhood status (independent variable) was examined by hierarchical multiple regression analysis while controlling for known sociodemographic correlates (independent variables) of the first variable.

The relationship between subjective wellbeing and life satisfaction (independent variables) and motherhood status (dependent variable) were examined by (separate) binary logistic regression analyses while controlling for known sociodemographic correlates of the dependent variable.

For all regression analyses sociodemographic factors of employment status, religious affiliation, highest level of education achieved, place of residence, country of birth and socioeconomic status were entered as controls. All were coded as dichotomous

variables, and scored 1 for those with the characteristic and zero otherwise. For example, employment status was coded as 0 = unemployed and 1 = employed (paid), country of birth (0 = born overseas and 1 = born in Australia), religious affiliation (0 = not affiliated with a religion and 1 = affiliated with a religion), highest level of education (0 = no post secondary school qualification and 1 = post secondary school qualification), place of residence (0 = regional or remote and 1 = major city) and socioeconomic status (0 = live in area of socioeconomic disadvantage and 1 = live in an area of socioeconomic advantage). Marital status was not included in the analyses due to its close association with motherhood status. The variables were entered in 'blocks'. The sociodemographic variables were entered as the first 'block' in all analyses. The other independent variable(s) were entered as the subsequent block.

Prior to conducting all regression analyses, assumptions regarding sample size, multi-collinearity and singularity, outliers, normality, linearity, homoscedasticity and independence of residuals were tested. For all of the above regression models, the independent variables showed some correlation with the dependent variable, and the correlation between the independent variables was less than $r = 0.70$. Tolerance values were all greater than 0.10 and there were no variance inflation factors greater than 10. Thus, there was no confounding on the basis of multi-collinearity in any of the models. Visual inspection of the normal probability plots suggested no major deviations of normality. There were no significant outliers in any of the independent variables. No violations of the other assumptions were found.

The method of estimation used for all multiple regression analyses was ordinary least squares.

4.7.3.6 Qualitative data

Transcribed comments that had been recorded in the spaces provided and at the end of the questionnaire were scrutinised and their content was identified and grouped. Individual comments are used throughout the presentation of the results to illustrate or enhance quantitative findings. Comments were selected for inclusion because they illustrated the qualitative finding and/or were representative of a number of similar comments made by several participants. Where there was a range of comments

provided, several comments are included to represent the diversity of experiences of participants.

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5 RESULTS

5.1 RESPONSE

The names and addresses of 1280 women aged 30-34 years in 2005 living in the state of Victoria were randomly selected from the Australian Electoral Roll by the Australian Electoral Commission (AEC) and provided to the researcher. Two electors were identified as male and therefore removed from the sample. Letters of invitation to participate in the study were sent in May 2005 by mail to all names and addresses listed. Participation involved the completion of a self administered anonymous postal questionnaire. Of the 1278 mailed questionnaires, 59 were returned unopened due to incorrect mailing addresses.

In total 381 completed questionnaires were received prior to the reminder letter being sent (late May 2005) and a further 188 completed questionnaires were received subsequently. Two completed questionnaires were received approximately a year and a half (November 2006) after the initial mail out but were not included in the analyses because data analysis had already commenced. In total, 569 women completed and returned questionnaires (46.7%) (Table 5.1).

Table 5.1 Questionnaire response

Questionnaires	Number
Sent	1278
Returned to researcher unopened	59
<i>Total</i>	<i>1219</i>
Returned completed	569
<i>Response</i>	<i>46.7%</i>

The study's response is substantially higher than that typically achieved by anonymous postal questionnaires sent to random samples obtained from the Australian Electoral Roll, which are usually around 30 percent (Runnion 2001, Bartlett et al. 2008). Data were not able to be collected about those who did not respond to the survey so similarities or differences between respondents and non respondents could not be established.

5.2 SOCIODEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

Details about the participants' sociodemographic characteristics were collected in order to establish a sociodemographic profile of the participants and to enable comparison with women in the general population.

5.2.1 Age

The AEC selected electors for the sample whose ages were calculated to be between 30 and 34 years as at 5 April 2005. The questionnaires were not sent until the week starting 9 May 2005. Consequently, several (n=12) participants had turned 35 years by the time the questionnaire was received. These participants were nevertheless included in the analyses.

The participants were aged between 30 and 35 years of age with a mean age of 32.3 years. Therefore, the participants are in the age group of women who have the highest fertility rate in Australia (30-34 years).

5.2.2 Marital status

Most participants were partnered; 353 (62.0%) were married and 85 (15.0%) were in de facto relationships (including two same sex relationships (0.35%)). Seventeen (3.0%) participants were separated, fifteen (2.6%) divorced and three (0.5%) widowed. Ninety-six (16.9%) participants had never married. The proportion of women who were partnered was significantly higher among the participants than women of the same age in the general Victorian population (77.0% versus 69.8% respectively, $p < 0.0001$) (Australian Bureau of Statistics 2007d).

5.2.3 Highest level of completed education

The highest level of education completed by the participants is shown in Table 5.2. Most participants (n=384, 67.5%) had completed a post secondary school qualification.

Table 5.2 Highest level of completed education of participants

	No Post Secondary School Qualification	Non Degree Qualification	Bachelor Degree & Above
Sample (n=569)	32.5%	26.7%	40.8%

Compared with all women of the same age in the general Victorian population, the participants were significantly more likely to hold a post secondary school qualification (67.5% versus 62.3% respectively, $p=.009$) (Australian Bureau of Statistics 2002b). Although this result is statistically significant, the difference is not large and the sample includes women with a diverse range of educational backgrounds including a considerable proportion of women who did not have a post secondary school qualification.

5.2.4 Geographic location

Participants' residential postcodes were classified according to the Australian Standard Geographical Classification (ASGC) (Australian Bureau of Statistics 2004a) which provides a measure of geographic location.

Table 5.3 Geographic location of participants

	Major City	Inner Regional	Outer Regional	Remote
Sample (n=559)	73.7%	22.0%	4.3%	0.0%

Despite most participants residing in a major city, the participants were significantly less likely to live in a major city than all Victorian women aged 30-34 years (73.7% versus 77.8% respectively, $p=.027$) (Australian Bureau of Statistics 2001a), and over a quarter of the participants lived in a regional area.

5.2.5 Socioeconomic status

Each participant's postcode was scored according to the Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-Economic Advantage/Disadvantage (IRSAD) in order to assess their socioeconomic status (Australian Bureau of Statistics 2003h).

Table 5.4 Socioeconomic status of participants

	Min IRSAD	Max IRSAD	Mean IRSAD
Sample (n=557)	843.12	1218.16	1022.00

The participants' average socio-economic status was significantly higher than that of the general Victorian population (1022.00 versus 986.73 respectively, $p < 0.0001$) (Australian Bureau of Statistics 2003h). Surveys are more often answered by people of higher socio-economic status (Green 1996). This may have influenced the findings of the study as women living in higher socioeconomic locations tend to have lower fertility rates than women living in more disadvantaged locations (Australian Bureau of Statistics 2007d).

5.2.6 Housing

Most participants (n=399, 70.1%) lived in a house or flat that they owned or were purchasing. The remainder were in rented accommodation (n=117, 20.6%) or had other arrangements such as being a boarder or lodger (n=53, 9.3%). The level of home ownership or home purchasing in the sample is similar to that of the total Victorian population (70.10% versus 71.6% respectively, $p = .509$) (Australian Bureau of Statistics 2007h).

5.2.7 Living arrangements

The majority of participants lived with their partner only or their partner and their children.

Table 5.5 Living arrangements of participants

	Live with partner/children	Lone parent	Group household	Live alone
Sample (n=569)	77.2%	5.6%	10.7%	6.5%

Women in the sample were significantly more likely to live with their partner or their partner and children compared to women aged 25-34 years the general Victorian population (77.2% versus 61.0% respectively, $p < 0.0001$) (Australian Bureau of

Statistics 2006a). This is likely to be because of the inclusion of a younger age range in the comparison population.

5.2.8 Employment and occupation

The majority of participants (n=436, 77.2%) were in paid employment. Of the participants who were not in paid employment, most (n=114, 20.2%) were providing full time care for children at home. The remainder were students (n=4, 0.7%), unemployed (n=4, 0.7%), full time carers for elderly or ill relatives (n=2, 0.4%), or unable to work due to sickness or injury (n=2, 0.4%). Four participants did not provide details of their employment status. Women in the sample were significantly more likely to be employed than women aged 25-34 years in the general Victorian population (77.2% versus 65.6% respectively, $p < 0.0001$) (Australian Bureau of Statistics 2001b). This is also likely to be because of the inclusion of a younger age range in the comparison population.

Of the participants who had a paid job, most (n=241, 55.7%) were employed on a full time (35 hours per week or more) basis. Compared with women aged 25-34 years in the general Victorian population, the participants were significantly more likely to be in full time employment (55.7% versus 40.0% respectively, $p < 0.0001$) (Australian Bureau of Statistics 2001b). Once again this is likely to be due to the age range of the comparison population.

The participants' occupations were classified according to the Australian Standard Classification of Occupations (ASCO) (Australian Bureau of Statistics 1997a) and the distribution of occupational categories is summarised in Table 5.6.

Table 5.6 Occupational status of participants

Occupation	Sample (n=424)	Vic. Women (25-34 years)*
Managers & Administrators	13.9%	5.8%
Professionals	36.6%	27.4%
Associate Professionals	11.3%	13.0%
Tradespersons & Related Workers	4.3%	3.1%
Advanced Clerical & Service Workers	5.7%	7.4%
Intermediate Clerical, Sales & Service Workers	18.9%	25.5%
Intermediate Production & Transport Workers	0.0%	2.3%
Elementary Clerical, Sales & Service Workers	6.1%	9.2%
Labourers & Related Workers	3.3%	4.8%

* Australian Bureau of Statistics (2001b)

Compared to women aged 25-34 years in the general Victorian population (Australian Bureau of Statistics 2001b), participants were significantly more likely to have occupations in the three highest ASCO levels (Managers and Administrators, Professionals, and Associate Professionals) (61.8% versus 46.2% respectively, $p < 0.0001$). This may have influenced the findings of this study as fertility rates tend to be lower among women with higher levels of participation in the paid workforce and who are in professional or related jobs (Jain and McDonald 1997, McDonald 2000a, De Vaus 2002).

5.2.9 Country of birth

Twenty-nine countries of birth were represented in the sample. Most participants ($n=515$, 90.7%) were born in Australia. Of the remainder, five women (0.9%) were born in Oceania (which includes New Zealand), 23 (4.0%) in Europe, seven (1.2%) in Africa and the Middle East, 15 (2.7%) in Asia and three (0.5%) in the Americas. One participant did not provide her country of birth.

Of the participants who were born overseas, the average length of residence in Australia was 20.1 years. The minimum number of years a participant had resided in Australia was five years and the maximum 33 years.

The proportion of women born in Australia was significantly higher in the study sample than women aged 25-34 years in the general Victorian population (90.7% versus 80.6% respectively, $p < 0.0001$) (Australian Bureau of Statistics 2002b).

5.2.10 Ethnic origin

Four (0.7%) participants identified themselves as being of Aboriginal heritage. The proportion of the sample which was of Aboriginal or Torres Strait Islander (ATSI) origin was similar to the proportion of ATSI women aged 25-34 years in the general Victorian population (0.7% versus 0.5% respectively, $p=.638$) (Australian Bureau of Statistics 2001b).

The participants' mothers were born in forty-two different countries. The participants' fathers were born in forty-one different countries. Most parents of the participants were born in Australia (mothers: $n=373$, 66.0%; fathers: $n=356$, 63.5%).

5.2.11 Religious affiliation and importance

Women with no religious affiliation are more likely to be childless than women who are affiliated with a religion (Australian Bureau of Statistics 1999). The participants were asked to indicate if they were affiliated with any religious group. The religious groups identified by the participants were classified according to the Australian Standard Classification of Religious Groups (ASCRG) (Australian Bureau of Statistics 1996a). The majority of participants were Christian. Nineteen participants did not specify their religious affiliation.

Participants in the sample were significantly less likely to report being affiliated with a religious group than women aged 25-34 years in the general Victorian population (62.7% versus 71.3% respectively, $p<0.0001$) (Australian Bureau of Statistics 2007f).

Table 5.7 Religious group affiliation of participants

Religious Group	Sample (n=550)
Buddhist	1.3%
Christian	58.0%
Hindu	0.2%
Jewish	0.5%
Muslim	0.9%
Other Religious Group	1.8%
No Religious Affiliation	37.3%

Approximately a quarter of the participants (n=147, 25.9%) regarded religion as important in their daily lives. The remainder regarded religion as neither important nor unimportant (n=238, 41.8%), or as not important (n=178, 31.3%).

5.2.12 Sexual orientation

The majority of participants identified themselves as heterosexual. Twenty-four participants did not specify their sexual orientation.

Table 5.8 Sexual orientation of participants

	Heterosexual	Lesbian	Bisexual
Sample (n=545)	98.2%	0.4%	1.5%

The proportion of participants who identified themselves as heterosexual is similar to the proportion of women aged 16-59 years in the general Australian population (98.2% versus 97.7% respectively, $p=.419$) (Smith et al. 2003b).

5.2.13 Family of origin

Most (n=551, 96.8%) participants had siblings when they were growing up, with an average number of 2.2 siblings and a maximum number of ten. Eighteen (3.2%) participants were only children.

Over a third of the participants (n=210, 36.9%) were the eldest child in their family. 147 (25.8%) participants were middle children, that is between the eldest and the youngest, and 197 (34.6%) were the youngest child.

5.2.14 Summary

As is common with this form of data collection, participants in the sample were significantly more likely to hold a post secondary school qualification, live in an area of socioeconomic advantage, be employed and not be affiliated with a religion than women in the general population (Green 1996). Despite these differences in sociodemographic characteristics, the relatively high response to the survey and the recruitment of women from a random sample of the Australian Electoral Roll has enabled a large and diverse sample of women to be recruited. The sample included a considerable number of women who did not have a post secondary school

qualification, a substantial proportion that lived in a regional area, and women from a range of socioeconomically advantaged and disadvantaged areas. The response to the questionnaire probably reflects the fact that concerns about childbearing are of great interest and relevance to contemporary Australian women of this age group.

5.3 REPRODUCTIVE EXPERIENCES

Details about reproductive experiences were collected in order to provide a reproductive profile of the participants. This data enabled subgroups of participants (such as mothers and women who did not have children) to be identified and compared, and allowed comparison of the sample with women in the general population in order to determine the representativeness of the sample.

5.3.1 Motherhood status

For the purposes of this study, a mother was defined as a woman who had given birth to a child or was pregnant with her first child. Most participants were mothers (n=350, 61.5%). The proportion of participants who are mothers is similar to the proportion of women of the same age in the Victorian population who are mothers (61.5% versus 59.2%, $p=.262$) (Australian Bureau of Statistics 2007g).

5.3.1.1 Motherhood status and sociodemographic factors

Participants who did not have children were significantly more likely to have a higher level of education; live in an area of greater socioeconomic advantage; be employed; and live in a major city than mothers. Mothers were more likely to be partnered (married or de facto); and own or be purchasing their own home than childless women. Mothers and women who did not have children were similar in terms of their country of birth and religious affiliation (Table 5.9)

Table 5.9 Selected sociodemographic characteristics of the sample by motherhood status

	Mothers (n=350)	Childless Women (n=219)	Sig
Partnered (married or defacto)	88.3%	58.9%	p<0.0001
Post Secondary School Education	62.6%	75.4%	p=.003
Socio-economic status (mean IRSAD)	1005.2	1049.1	p<0.0001
Employed (Paid)	68.4%	97.7%	p<0.0001
Born in Australia	88.9%	93.2%	p=.096
Affiliated with a Religious Group	61.6%	64.5%	p=.555
Home Owner or Purchaser	79.3%	56.2%	p<0.0001
Geographic Location (live in a major city)	67.9%	83.1%	p<0.0001

These findings support existing evidence showing that women living in Australia's major cities or higher socioeconomic locations have lower fertility rates than women living in remote areas or more disadvantaged locations (Jain and McDonald 1997, Barnes 2001, Australian Bureau of Statistics 2002a, De Vaus 2002, Vanstone 2002). Married women in Australia have more children than those who have never married (Jain and McDonald 1997, De Vaus 2002); and women who have an undergraduate degree or higher level qualification are more likely to have fewer or no children than women who do not have post school qualifications (Jain and McDonald 1997, McDonald 1998, Barnes 2001, Australian Bureau of Statistics 2002c, De Vaus 2002).

5.3.2 Desires about having children

Most participants (n=423, 74.7%) wanted children. The remainder of participants were ambivalent about having children (n=100, 17.7%) or said they had no control over the decision to have or not have children (n=23, 4.1%). Only 20 participants (3.5%) said they definitely did not want to have children. Three participants did not respond to the question.

This result is consistent with the finding of other large population based Australian studies such as the Australian Institute of Family Studies' Fertility Decision Making Project (Weston et al. 2004) which also found that most women want children and that voluntary childlessness is very uncommon.

5.3.3 Reproductive history

The participants' reproductive history is summarised and compared to general population data from Victoria and Australia in Table 5.10.

Table 5.10 Participants' reproductive history

	Sample	General Population	Sig
Had adopted children	0.0% (0/486)	n/a	
Had foster children	2.5% (12/489)	0.2% ⁽¹⁾	p=.001
Had step children	8.6% (42/489)	5.9% ⁽²⁾	p=.035
Live birth (>36 weeks)	88.7% (291/328)*	91.5% ⁽³⁾	p=.113
Premature birth (≤36 weeks)	11.5% (32/278)*	7.8% ⁽³⁾	p=.054
Stillbirth	2.2% (6/272)*	0.7% ⁽³⁾	p=.093
Miscarriage	30.5% (106/295)*	33.4% ⁽⁴⁾	p=.282
Abortion	21.8% (107/293)*	22.6% ⁽⁴⁾	p=.754
Caesarean birth	32.1% (95/296)*	29.5% ⁽³⁾	p=.341

* Only includes participants who were mothers

⁽¹⁾ Australian Bureau of Statistics (2003g: 34)

⁽²⁾ Australian Bureau of Statistics (2003f)

⁽³⁾ Victorian Perinatal Data Collection Unit (2005)

⁽⁴⁾ Smith (2003a)

Although no participants reported adopting any children it is not possible to compare this result to the number of adoptions in the general population as the number of families with adopted children in Australia is not known. Only a small number of children are adopted in Australia each year (568 in 2006-07). Adoptions in Australia have decreased considerably since the 1970s and are now largely made up of adoptions of children from overseas (71% of adoptions in 2006-07) (Australian Institute of Health and Welfare 2008, Department of the Prime Minister and Cabinet 2008: 14).

Apart from the participants being significantly more likely to have fostered a child(ren) or have step child(ren) than women in the general population, the reproductive history of the participants is similar to that of women in the general population.

5.3.4 Number of children

Most participants had one or two children. The average number of children ever born to participants is similar to that born to Victorian women of the same age (1.1 versus 1.2, $p=.196$) (Australian Bureau of Statistics 2007g).

Table 5.11 Number of children ever born to participants

No. of Children	Sample (n=569)	Vic. Women (30-34yrs)*
0	41.7%	40.8%
1	21.8%	21.0%
2	24.4%	25.0%
3	9.8%	9.5%
4	1.8%	2.7%
5	0.5%	1.1% ⁽¹⁾
Mean	1.1	1.2

⁽¹⁾ Five or more children

* Australian Bureau of Statistics (2007g)

The mean age of the children was 4.6 ± 3.8 (0-18) years, and the median was four years.

5.3.5 Pregnancy

Fifty-nine (10.4%) participants were pregnant. The remainder (n=510, 89.6%) were not pregnant or did not know if they were pregnant.

Table 5.12 Pregnant participants

	Frequency (n=59)	Percent (of Pregnant Participants)
Pregnant with first child	18	30.5%
Pregnant with second child	28	47.5%
Pregnant with third child	5	8.5%
Pregnant with fourth child	7	11.9%
Pregnant with sixth child	1	1.7%

5.3.6 Motherhood and age

5.3.6.1 Age at first birth

Of the participants who had given birth to a child, the average age at first birth was 27.1 years. The youngest age at first birth was 16 years.

Table 5.13 Participants' age at first birth

Age	Sample (n=332) Frequency	Sample Percent	Vic. Women (General Population)*
≤ 19 years	18	5.4%	2.8%
20-24 years	66	19.9%	11.3%
25-29 years	136	41.0%	25.8%
30-34 years	112	33.7%	37.6%
Mean	27.1 years		29.4 years

* Victorian Perinatal Data Collection Unit (2005)

Overall, the participants' average age at first birth was significantly lower than the average age at first birth for all Victorian women in 2004 (27.1 years versus 29.4 years, $p < 0.0001$) (Victorian Perinatal Data Collection Unit (Victorian Government Department of Human Services) 2005: 24). It is likely that the restricted age group of the sample (that is, 30-35 years) explains why the participants' average age at first birth differed from that of the general population's which is calculated using data which includes Victorian women aged less than 20 years to over 40 years.

5.3.6.2 Ideal age at first birth

Participants who did not have children (excluding those who did not want to have children) were asked to specify how old they would like to be when they had their first child. Of these participants, most participants indicated they would like to be in their early to mid thirties when they had their first child. Less popular ages were early twenties and late thirties to early forties.

Table 5.14 Participants' ideal age at first birth

Age	Frequency (n=199)	Percent
≤24 years	1	0.5%
25-29 years	6	3.0%
30-31 years	28	14.1%
32-33 years	52	26.1%
34-35 years	91	45.7%
36-37 years	12	6.0%
38-39 years	5	2.5%
40 years	3	1.5%
41-45 years	1	0.5%
Mean	33.5 years	

Overall, this sub-group of participants' average ideal age at first birth was significantly older than the average ideal age at first birth for childless Australian women aged 30-34 years in a recent population based study of fertility decision-making (33.5 years versus 29 years, $p < 0.0001$) (Weston et al. 2004). The difference between the participants' average ideal age at first birth and that for another Australian sample of the same age may reflect the employment status and education level of the participants. Participants who did not have children mostly had a post secondary school qualification and were employed. These are factors associated with later ages at first birth (Australian Bureau of Statistics 2007a).

5.3.6.3 Age decided not to have children

Participants who did not want to have children were asked to indicate the age when they had decided not to have children. Of these participants, most reported that they did not know what age they had decided not to have children or could not remember. The remainder mostly stated that they had made their decision as a teenager or in their twenties.

Table 5.15 Age participants decided not to have children

Age	Frequency (n=28*)	Percent (of Participants Who Did Not Want Children)
≤ 12 years	1	3.6%
12-19 years	4	14.3%
20-29 years	5	17.9%
≥ 30 years	1	3.6%
Don't know/can't remember	17	60.7%

* 20 participants identified themselves as not wanting children. However, a further eight participants who were 'ambivalent about having children' also answered this question.

5.3.7 Fertility status

About half of the participants indicated that they and their partner (either current or previous) had no problem with fertility. Nevertheless, eighty-four (15.2%) participants had tried unsuccessfully to conceive for twelve months or more. Of these, most (n=56, 66.7%) had sought help or treatment for infertility.

Table 5.16 Fertility status of participants

	Frequency (n=552)	Percent
Not sought help or treatment for infertility	28	5.1%
Sought treatment for diagnosed female infertility	19	3.4%
Sought treatment for diagnosed male infertility	6	1.1%
Sought help for unexplained infertility	31	5.6%
Never tried to get pregnant	194	35.1%
No problem with fertility	274	49.6%

Overall, the proportion of participants who reported having difficulties conceiving was similar to the proportion of Australian women aged 16-59 years in the general population who have difficulties conceiving (15.2% versus 15.5% respectively, $p=.854$) (Smith et al. 2003a).

The proportion of participants who reported having had fertility treatment was also similar to the proportion of Australian women aged 16-59 years in the general

population who have had fertility treatment (10.1% versus 8.4% respectively, $p=.175$) (Smith et al. 2003a).

It has been argued that the development of reproductive technologies, such as in vitro fertilisation (IVF), has resulted in women believing fertility problems can be easily solved and hence, many women leave it too late before trying to conceive or seeking assistance for infertility (Briscoe 2004: 19, Hall 2005, Weston and Qu 2005, Hutchinson 2006, Nader 2006). These results, however, indicate that women with fertility difficulties in this age group do actively seek help or treatment for infertility.

5.3.8 Contraception

More than half of the participants ($n=305$, 53.8%) were currently not using contraception. Two participants did not want to answer this question. The proportion of participants who were using contraception is similar to the proportion of Australian women aged 30-34 years using contraception (46.2% versus 49.1% respectively, $p=.145$) (Ford et al. 2002: 69).

The reasons participants gave for not using contraception are outlined in Table 5.17.

Table 5.17 Participants' reasons for not using contraception

	Frequency ($n=303$)	Percent (of Participants Not Using Contraception)
Pregnant	59	19.5%
Recently had a baby	30	9.9%
Actively trying to become pregnant	48	15.8%
Can't have children	21	6.9%
Partner can't have children	31	10.2%
No male sexual partner	51	16.8%
Not really trying to get pregnant but wouldn't mind if did	41	13.5%
Other*	22	7.3%

* 'Other' includes reasons such as not wanting to use contraception for health or medical reasons.

The reasons participants gave for not using contraception are similar to the most frequently reported reasons given by Australian women aged less than 35 years which are pregnancy, trying to conceive and not being sexually active (Ford et al. 2002: 68).

5.3.9 Summary

Most participants wanted children and were mothers. Very few participants definitely did not want to have children. Although participants in the sample were significantly more likely to be in paid employment and living in an area of sociodemographic advantage factors usually associated with lower fertility rates, the reproductive experiences of the sample were similar to women of the same age in the general population. It is reasonable therefore to suggest that the participants' reproductive experiences should fairly accurately represent those of Australian women of the same age in the general population and that the findings are generalisable.

5.4 CHILDBEARING DESIRES AND EXPECTATIONS

It has been argued that intentions about future fertility are strong predictors of future behaviour (Schoen et al. 1999). Women's desires and expectations about having children were assessed in the questionnaire.

5.4.1 Childbearing desires

5.4.1.1 Ideal number of children

The participants were asked to identify their ideal number of children. Most participants (71.3%) desired two or three children. The participants' mean ideal number of children (2.6) is similar to that desired by Australian women of the same age (2.6) ($p=.984$) in the Australian Institute of Family Studies' Fertility Decision Making Project (Weston et al. 2004: 167), and is above the replacement level fertility rate currently estimated to be around 2.1 babies per woman (Australian Bureau of Statistics 2006b). Two or three children is also regarded as normative family size by contemporary Western standards (Mueller and Yoder 1999).

Table 5.18 Participants' ideal number of children

No of Children	Sample (n=550)	Aust. Women (30-34yrs)*
0	3.6%	3.1%
1	6.0%	7.3%
2	43.5%	45.4%
3	27.8%	25.3%
4	14.9%	18.9% ¹
5 or more ²	4.2%	
Mean	2.6	2.6

¹ Four or more children

² The maximum number of children desired by a participant was eleven. This participant was aged 34 years and currently had no children.

* Weston et al. (2004: 167)

There was a significant difference between the actual number of children ever born to participants (M=1.1) and their ideal number (M=2.6) ($p < 0.0001$). At the time of being surveyed most participants (79.6%) had fewer children than they desired.

5.4.1.2 Future childbearing desires

There has been a recent decline in fertility rates amongst younger women in Australia while fertility rates for older age groups have increased (Australian Bureau of Statistics 2003c). The age range of the participants (30-35 years) makes it unlikely that most would have completed their childbearing given that they were not yet at the end of their reproductive years and the current trend in Australia is for childbearing at later ages. In order to determine if the participants wanted to have more children than they currently had, they were asked to indicate their desire to have a child or more children in the future on a scale ranging from 'definitely want a(nother) child' (10) to 'definitely don't want a(nother) child' (1). The mean score was 6.7 (SD=3.4). The participants' scores were skewed (skewness= -0.63) towards the definitely want a(nother) child end of the scale. Most participants (60.2%) reported that they would like to have a child or more children in the future (calculated as a score of ≥ 6 on the scale).

Future childbearing desires and motherhood status

Participants who were not mothers were more likely to want to have a child in the future (M=7.9, SD=2.7) than mothers (M=5.9, SD=3.5) [t(540)=7.7, p<0.0001, 95% CI 1.5 to 2.5].

Future childbearing desires and parity

Given the ideal number of children for most participants was two or three, it was hypothesised (Hypothesis 1) that women who already had this number of children would be less likely to desire more children in the future than women with fewer or no children. Participants who had two or more children or were pregnant with their second child were significantly less likely to want children in the future (M=4.8, SD=3.3) than women who did not have children (M=7.9, SD=2.7) or women who had one child or were pregnant with their first child (M=8.3, SD=2.6) [F(2,565)=84.4, p<0.0001]. Thus, Hypothesis 1 was supported.

5.4.2 Childbearing expectations

5.4.2.1 Likelihood of having children in the future

In order to understand the participants' expectations about having children in the future they were asked to indicate how likely it was that they would have a child or more children in the future on a scale ranging from 'very unlikely' (1) to 'very likely' (10). The mean score was 5.8 with a standard deviation of 3.5. More than half of the participants (n=306, 53.8%) reported that they were unlikely to have a child or more children in the future (calculated as a score ≤ 6 on the scale). The proportion of participants who thought it was unlikely they would have a(nother) child in the future is significantly smaller than the proportion of Australian women of the same age in the Australian Institute of Family Studies' Fertility Decision-Making Project (58.0%, p=.046) (Weston et al. 2004).

Likelihood of having children in the future and motherhood status

Participants who were not mothers were more likely to think they would have a child in the future (M=7.1, SD=2.8) than mothers (M=5.0, SD=3.6) [t(539)=7.9, p<0.0001, 95% CI 1.6 to 2.6].

Likelihood of having children in the future and parity

Hypothesis 2 was that women who have no children or only one child are more likely to think they will have a child in the future than women who have two or more children (Weston et al. 2004: 183). Participants who had two or more children or were pregnant with their second child were significantly less likely to think they would have children in the future ($M=3.7$, $SD=3.1$) than women who did not have children ($M=7.1$, $SD=2.8$) or women who had one child or were pregnant with their first child ($M=7.7$, $SD=2.9$) [$F(2, 566)=102.3$, $p<0.0001$]. The results support the hypothesis and are similar to existing evidence. These findings are also consistent with participants' ideal number of children. Most participants desired two or three children. Participants who had already achieved this number of children were less likely to think they would have children in the future than those who did not have children or who only had one child.

5.4.3 Satisfaction with current number of children

The participants were asked to indicate their level of satisfaction with the number of children they currently had or their decision not to have children on a scale ranging from 'completely dissatisfied' (1) to 'completely satisfied' (10). The mean satisfaction score for the sample was 6.6 with a standard deviation of 3.0. The participants' scores were skewed (skewness= -0.4) towards the satisfied end of the scale. The majority of participants (61.2%) indicated that they were mostly satisfied with the number of children they currently had or their decision not to have children.

5.4.3.1 Satisfaction with current number of children and motherhood status

Mothers were significantly more likely to be satisfied with their current number of children ($M=7.2$, $SD=2.9$) than women who did not have children ($M=5.6$, $SD=3.0$) [$t(532)= -6.3$, $p<.0001$, 95% CI -2.2 to -1.1].

5.4.3.2 Satisfaction with current number of children and parity

Given the ideal number of children for most participants was two or three, Hypothesis 3 was that participants who had this number of children would be more satisfied than those who did not. Participants who had two or more children or were pregnant with their second child were significantly more satisfied with their current number of

children ($M=7.6$, $SD=2.8$) than women who had no children ($M=5.6$, $SD=3.0$) and women who had one child or were pregnant with their first child ($M=6.4$, $SD=2.9$) [$F(2, 531)=27.6$, $p<0.0001$]. The results support the hypothesis.

5.4.4 Summary

Most women in the sample wanted children, and the majority (71.3%) desired two or three children. The mean number of children participants currently had was 1.1. Most women (79.6%) at the time of being surveyed had fewer children than they desired. The age range of the sample (30-35 years) makes it unlikely that most participants would have completed their childbearing. Yet when asked if they were likely to have (more) children in the future, more than half of the women (53.8%) said they were unlikely to.

Although there was a disparity between participants' current number of children and their ideal number of children, it is interesting to note that most participants (61.2%) were satisfied with their current number of children. It may be that women modify their expectations about having children in response to their circumstances (Schoen et al. 1999, Weston and Qu 2001a). Participants may have 'accepted' their current number of children due to constraints (both perceived and actual) which they believed would affect the likelihood of them having (more) children in the future.

There were significant differences in the childbearing desires and expectations of mothers and women who did not have children. In particular, mothers who had two or three children were less likely to want children in the future, less likely to think they would have children in the future and were more satisfied with their current number of children. This probably reflects the fact that women who have two or three children have achieved their ideal (and social normative) family size.

5.5 PRESSURE FROM OTHERS TO HAVE CHILDREN

There is evidence to suggest that women often feel pressure from significant others (such as their partner, parents, friends, work colleagues and the media) to have children (Baum and Cope 1980, Marshall 1993, Bartlett 1994, Vissing 2002). However, this is mostly based on the experiences of women who do not have

children. It is not well understood if mothers felt pressure to have children or feel pressure to have more children. Little is also known about which particular significant others exert the greatest amount of pressure on women to have children. This study investigated the amount of pressure women felt to have children from various significant others, and compared the experiences of women who did not have children with those of mothers.

5.5.1 Pressure from others to have children

Participants were asked to identify on a Likert scale ranging from 'a lot of pressure' (1) to 'no pressure' (3) how much (if any) pressure they currently felt or had felt from each of the following significant others to have children: partner; mother; father; partner's mother; partner's father; siblings; other family members (such as aunts, uncles, cousins and grandparents); friends; work colleagues; neighbours; broader social pressure (such as the media and the government); and their religion.

A 'pressure score' was calculated for each participant for every individual significant other. These scores were then averaged to obtain an overall pressure score for each participant. The mean overall pressure score for the sample was 2.7 with a standard deviation of 0.3. The results were skewed (skewness= -1.5) towards the 'no pressure' end of the scale. Overall 'pressure scores' were not able to be calculated for 16 (2.8%) participants due to non response.

Table 5.19 The amount of pressure felt by participants from others to have children

Significant Other	Amount of Pressure		
	A lot	A little	None
Partner (n=492)	6.1%	16.7%	77.2%
Mother (n=532)	9.8%	33.1%	57.1%
Father (n=515)	5.6%	17.9%	76.5%
Mother in Law (n=473)	11.4%	20.5%	68.1%
Father in Law (n=451)	4.9%	14.2%	80.9%
Siblings (n=524)	3.2%	23.1%	73.7%
Other family members (n=530)	5.3%	30.0%	64.7%
Friends (n=544)	5.7%	30.0%	64.3%
Work colleagues (n=531)	3.8%	17.9%	78.3%
Neighbours (n=507)	1.4%	4.9%	93.7%
Broader social pressure (n=522)	5.6%	21.5%	73.0%
Religion (n=425)	2.4%	5.2%	92.5%
Overall Pressure from Others (n=553)	1.3%	23.5%	75.2%

The proportion of participants who felt a lot, a little and no pressure from individual significant others is shown in Table 5.19. The person who exerted the greatest amount of pressure on the participants to have children was their mother, and the people who exerted the least pressure were the participants' neighbours. Overall, most participants did not feel pressure from others to have children.

Participants were also asked if they had felt any pressure from their partner not to have children. Most participants (n=466, 82.1%) reported not having felt any pressure from their partner not to have children. Most participants (n=423, 74.7%) wanted children. However, a proportion of participants (n=100, 17.7%) were ambivalent about having children. Interestingly there was a significant difference in the amount of pressure participants felt from their partner not to have children between participants who wanted children and those who were ambivalent about having children [$F(3, 470)=6.3, p<0.0001$]. The effect size was small (eta-squared= 0.04). Participants who were ambivalent about having children felt more pressure from their partners not to have children ($M=2.56, SD=0.7$) than those who wanted children ($M=2.8, SD=0.5$).

5.5.2 Pressure from others and motherhood status

There was a significant difference in the amount of pressure felt from others to have children between childless participants (M=2.5, SD=0.4) and mothers [M=2.8, SD=0.3; $t(381) = -7.1$, $p < 0.0001$, 95% CI -0.3 to -0.2], with mothers reporting less pressure from others to have children.

Given the significant differences in the sociodemographic characteristics of mothers and women who did not have children, a hierarchical multiple regression analysis was conducted in order to determine if the significant relationship between pressure from others and motherhood status remained when the effects of sociodemographic characteristics were controlled for. Of all the independent variables, motherhood status made the strongest unique contribution to explaining the amount of pressure women felt from others to have children. Motherhood status also made a statistically significant contribution. Specifically participants who were mothers felt less pressure from others to have children than childless women. The results show there was a statistically significant difference in the amount of pressure felt from others between mothers and women who did not have children even when the effects of sociodemographic characteristics were controlled for (Table 5.20).

Table 5.20 Pressure from others to have children by sociodemographic characteristics and motherhood status

Independent Variables	B	Std Error	Sig
Employed (paid)	-.012	.037	p=.795
Born in Australia	.083	.048	p=.047
Affiliated with a religious group	.003	.029	p=.939
Post secondary school qualification	-.024	.031	p=.571
Live in an area of socioeconomic advantage	.046	.034	p=.282
Mother	.307	.032	p<0.0001
Constant	2.437		
Adjusted R ²	.091		

There was also a significant difference in the amount of pressure felt from others to have children for participants of different parities [$\chi^2(2)=67.4$, $p < 0.0001$]. Women

who had two or more children reported the least amount of pressure from others to have children while women who did not have children felt the most pressure.

Several participants wrote comments regarding the pressure from others to have children. Almost all these comments were made by women who did not have children and who felt pressure to have children. For example:

“Pressure is high. Husband really wants kids.” [Partnered woman without children aged 34 years]

“I’m still unsure whether to have children or not but pressure from family is almost constant.” [Unpartnered woman without children aged 33 years]

“There is some pressure [to have children] at work from other women who have children.” [Partnered woman without children aged 32 years]

“There is often pressure from [my friends] to have children.” [Partnered woman without children who has sought treatment for infertility aged 33 years]

5.5.3 Summary

Most participants overall did not feel pressure from others to have children. This finding is consistent with existing evidence. Mueller and Yoder (1999) examined sixty married women’s perceptions and experiences regarding pressures to increase or limit their family size, and found that ratings of overall perceived pressure were generally low. Similarly, none of the participants in Langdrige et al.’s (2000) investigation of the reasons for parenthood reported that pressure from family or friends had influenced their desire to have children.

Yet there was a significant difference in the amount of pressure felt between mothers and women who did not have children, even when the effects of sociodemographic factors were accounted for. Women who did not have children felt more pressure than mothers. It may be that mothers feel less pressure than women who do not have children as they have fulfilled an expected social role of women to have children.

There was also a difference in the amount of pressure felt by participants according to their parity. Women who had two or three children felt less pressure than women who

did not have children. Women who have two or three children have fulfilled societal expectations regarding normative family size and therefore, are probably less likely than other women to feel pressure to alter their family size (Mueller and Yoder 1999).

A proportion of women did feel pressure from their partner not to have children. Interestingly participants who were ambivalent about having children were more likely to feel pressure not to have children than women who wanted children. It maybe that one of the reasons participants were ambivalent about having children is because their partners were exerting pressure on them not to have (more) children. These results suggest that some women encounter barriers including resistance to childbearing from their partner, and confirm that the influence of significant others may be salient factor in the childbearing behaviour of some women especially childless women and mothers who have fewer than two children.

5.6 ATTITUDES TOWARD WOMEN AND MOTHERHOOD

5.6.1 Attitudes toward women and motherhood scale

A new measure of attitudes toward women and motherhood, the Attitudes toward Women and Motherhood Scale, was designed for the purposes of this study. The Scale and its development are outlined in Chapter 4. The Scale was designed to differentiate women with egalitarian views about attitudes toward women and motherhood from those with more traditional views. Women who hold traditional attitudes are likely to consider that motherhood is central to their life and identity and takes precedence over potential occupational or professional aspirations. Women with egalitarian attitudes regard motherhood as only one part of their life and identity (Dreyer et al. 1981: 174, Kaufman 2000: 131, Konrad and Harris 2002, Barry and Beitel 2006: 512).

The underlying factor structure of the Scale was investigated by principal components analysis (PCA) with Varimax rotation (Appendix 7). Two items (1e 'Motherhood is just one possible option for women in Australia today' and 2d 'If both partners in a couple have paid jobs, they should share the housework and care of children equally') were deleted from the original scale as they did not load (factor loading < .30) onto any components in the original twenty item PCA suggesting that these items did not

measure the same underlying constructs as the others. This resulted in a final scale of eighteen items. Exploratory PCA of the final eighteen item scale revealed three components indicating three subscales. Cronbach alpha's for the three subscales were: 0.75, 0.68 and 0.24. As the Cronbach alpha's were relatively low for two of the subscales (< 0.70), the whole scale version of the measure was used for the purposes of this study. In the current study the Cronbach's alpha coefficient for the total scale was 0.75. Therefore, the scale appears to have good internal reliability.

In summary, the Attitudes toward Women and Motherhood Scale (Holton et al. 2009) consists of eighteen items: eight items measure attitudes about normative motherhood (items 5, and 12-18), six (items 6-11) measure views about the resources, roles and responsibilities of women, and four (items 1-4) measure beliefs regarding mothering in Australia. Each item has a five-point Likert scale ranging from strongly agree (1) to strongly disagree (5) with a neutral midpoint (that is, 'neither agree nor disagree') (3). Eight items (items 2, 6, 9, 11, 13, 15, 17 and 18) present an egalitarian point of view and the remainder present a traditional point of view. The item scores (the egalitarian items are reverse scored) are summed to obtain the total attitudes toward women and motherhood score for each participant. Possible scores range from 18 to 90. Total scores are not calculated for participants with missing data. Higher scores indicate more egalitarian attitudes. The final eighteen item scale is used in the following analyses and is presented in Table 5.21.

Table 5.21 Attitudes toward Women and Motherhood Scale (Final 18 Item Scale)

Item No.	Item
These are some statements about women in Australia (in general) today. How much do you agree or disagree with each of these statements?	
1	Women in Australia are viewed more favourably if they have children
2	<i>Women in Australia are able to have both a career and children</i>
3	Women in Australia are under pressure to have children
4	Motherhood is valued in Australia
These are some statements about roles, responsibilities and expectations of women. How much do you agree or disagree with each of these statements? I think that ...	
5	Whatever career a woman may have, her most important role in life is still that of being a mother
6	<i>It is OK for a woman to have a career and her partner to care for their children</i>
7	A man should earn more than his partner
8	Higher education is more important for men than women
9	<i>A mother who has a paid job can have as good a relationship with her children as a mother who does not work outside of the home</i>
10	A woman should be married before she has children
11	<i>It is OK for women with young children to work outside the home</i>
These are some statements about women and motherhood. How much do you agree or disagree with each of these statements? I think that ...	
12	A woman is not a 'real woman' until she becomes a mother
13	<i>A woman can live a full and happy life without ever having children</i>
14	A woman who doesn't want children is unnatural
15	<i>Having children is a small part of being a woman</i>
16	It is selfish not to want children
17	<i>Women should be able to decide if and when they have children</i>
18	<i>It is OK for a woman to choose not to have children</i>

Note: reversed items are marked in italics.

5.6.2 Results

Attitudes toward women and motherhood scores were calculated for 95.4% (543) of participants for whom complete data were available. The mean attitudes toward women and motherhood score of the sample was 66.1 ± 7.4 (40 - 88). The mean and standard deviation for each of the eighteen items are shown in Appendix 8. The sample's attitudes toward women and motherhood scores were skewed toward the egalitarian end of the range of possible scores (skewness = -0.2) (higher scores on the scale indicate more egalitarian attitudes).

5.6.2.1 Attitudes toward women and motherhood and childbearing behaviour

Two hierarchical multiple regression analyses (Tables 5.22 and 5.24) were used to examine the relationship between attitudes toward women and motherhood scale score (independent variable) and ideal number of children (dependent variable) and parity (dependent variable) whilst controlling for sociodemographic variables (independent variable) found to be associated with motherhood status such as level of education, employment status, religious affiliation and place of residence.

A binary logistic regression analysis (Table 5.23) was conducted to examine the relationship between motherhood status (dependent variable) and attitudes toward women and motherhood (independent variable) whilst controlling for known sociodemographic correlates (independent variable).

The following hypotheses were tested: women who hold more traditional attitudes toward women and motherhood are more likely to desire greater numbers of children (Hypothesis 4a); be mothers (Hypothesis 4b); and have larger actual family sizes (Hypothesis 4c) than women with egalitarian attitudes even after controlling for sociodemographic variables.

The sociodemographic variables were entered as the first block in all regression analyses.

Table 5.22 Ideal number of children by sociodemographic characteristics and attitudes toward women and motherhood (n=524)

Independent Variables	Unstandardised Coefficients		Standardised Coefficients		p-value
	(B)	S.E.	(Beta)	95% CI for B	
<i>Block 1</i>					
Constant	2.709	.148			
Employed (paid)	-.328	.111	-.129	-0.55 to -0.11	.003
Affiliated with a religion	.371	.096	.168	0.18 to 0.56	.000
Post secondary school qualification	-.001	.101	.000	-0.20 to 0.20	.994
Live in a major city	-.077	.110	-.032	-0.29 to 0.14	.486
Live in an area of socioeconomic advantage	-.081	.116	-.032	-0.31 to 0.15	.488
<i>Block 2</i>					
Constant	3.785	.440			
Employed (paid)	-.283	.112	-.112	-0.50 to -0.06	.011
Affiliated with a religion	.310	.098	.141	0.11 to 0.50	.002
Post secondary school qualification	.053	.103	.023	-0.15 to 0.26	.608
Live in a major city	-.075	.110	-.031	-0.30 to 0.14	.495
Live in an area of socioeconomic advantage	-.056	.116	-.022	-0.28 to 0.17	.629
Attitudes toward women and motherhood	-.017	.007	-.118	-0.30 to -0.00	.010
R^2	.047 (Model 1)				
Adjusted R^2	.059 (Model 2)				
R^2 change	.037 (Model 1)				
	.048 (Model 2)				
	.012				

Attitudes toward women and motherhood and ideal number of children

Hypothesis 4a was that women who had more traditional attitudes toward women and motherhood would desire larger numbers of children than women with egalitarian attitudes.

In the first Block, employment and religious affiliation were the only variables independently associated with ideal number of children. Specifically, participants who were in paid employment desired fewer children while women who were affiliated with a religion desired greater numbers of children.

In the second block attitudes toward women and motherhood were also significantly associated with ideal number of children. Specifically, participants who had more traditional attitudes toward women and motherhood desired greater numbers of children even when sociodemographic variables were controlled for. Thus, Hypothesis 4a was supported.

After the variables in Block 1 (sociodemographic characteristics) had been entered, the overall model explained 4.7% of the variance. After attitudes toward women and motherhood (Block 2) were included the model as a whole explained 5.9%. Thus, attitudes toward women and motherhood explained an additional 1.2% of the variance in ideal number of children even when the effects of sociodemographic characteristics are controlled for.

The model as a whole is significant [$F(6, 518)=5.40, p<0.0001$].

Table 5.23 Motherhood status by sociodemographic variables and attitudes toward women and motherhood

Independent Variables	B	S.E.	Wald	95% CI for B	p-value	OR
<i>Block 1</i>						
Constant	4.210	.551	58.373			67.324
Employed (paid)	-3.100	.472	43.170	0.02 to 0.11	.000	.919
Affiliated with a religion	-.021	.211	.010	0.65 to 1.48	.919	.909
Post secondary school qualification	-.096	.231	.173	0.58 to 1.43	.678	.501
Live in a major city	-.604	.261	5.353	0.33 to 0.91	.021	.547
Live in an area of socioeconomic advantage	-.692	.275	6.332	0.29 to 0.86	.012	.501
<i>Block 2</i>						
Constant	5.485	1.119	24.015			241.081
Employed (paid)	-3.062	.473	41.989	0.02 to 0.12	.000	.047
Affiliated with a religion	-.091	.218	.174	0.60 to 1.40	.676	.913
Post secondary school qualification	-.041	.235	.030	0.61 to 1.52	.862	.960
Live in a major city	-.604	.276	5.334	0.33 to 0.91	.021	.547
Live in an area of socioeconomic advantage	-.675	.261	5.979	0.30 to 0.88	.014	.509
Attitudes toward women and motherhood	-.020	.015	1.755	0.92 to 1.01	.185	.980

‘Goodness of fit’ tests indicate support for the model: $\chi^2(6)=121.40$, $p<0.0001$, Hosmer and Lemeshow test $\chi^2(6)=2.638$, $p=.955$

Cox & Snell R Square = 0.211 and Nagalekerke R Square = 0.287 suggesting that between 21.1% and 28.7% of the variability is explained by this set of variables.

The model correctly classified 67.9% of cases overall (an improvement of 60.9% in Block 0).

Attitudes toward women and motherhood and motherhood status

Hypothesis 4b was that women with more traditional attitudes toward women and motherhood were more likely to be mothers than women with egalitarian attitudes. However, attitudes toward women and motherhood, when entered in the analysis was not a significant predictor of motherhood status.

Employment and socioeconomic status and place of residence were the only variables independently associated with motherhood status. Specifically, participants who were in paid employment, lived in an area of socioeconomic advantage and/or a major city were less likely to be mothers. Religious affiliation, education status and attitudes toward women and motherhood did not contribute significantly to the model, indicating that when sociodemographic variables are controlled for there is no significant difference in attitudes toward women and motherhood between mothers and women without children. These results do not support Hypothesis 4b.

Table 5.24 Parity by sociodemographic characteristics and attitudes toward women and motherhood

Independent Variables	Unstandardised Coefficients		Standardised Coefficients		p-value
	(B)	S.E.	(Beta)	95% CI for B	
<i>Block 1</i>					
Constant	2.743	.144			
Employed (paid)	-1.138	.108	-.407	-1.35 to -0.93	.000
Affiliated with a religion	.045	.094	.018	-0.14 to 0.23	.633
Post secondary school qualification	-.176	.099	-.070	-0.37 to 0.12	.076
Live in a major city	-.437	.108	-.164	-0.65 to -0.23	.000
Live in an area of socioeconomic advantage	-.323	.114	-.116	-0.55 to -0.10	.005
<i>Block 2</i>					
Constant	3.807	.430			
Employed (paid)	-1.095	.109	-.392	-1.31 to -0.88	.000
Affiliated with a religion	-.015	.096	-.006	-0.20 to 0.17	.875
Post secondary school qualification	-.123	.101	-.049	-0.32 to 0.07	.220
Live in a major city	-.435	.107	-.163	-0.65 to -0.22	.000
Live in an area of socioeconomic advantage	-.299	.113	-.107	-0.52 to -0.77	.009
Attitudes toward women and motherhood	-.017	.006	-.106	-0.30 to -0.00	.009
R^2	.248 (Model 1)				
	.258 (Model 2)				
Adjusted R^2	.241 (Model 1)				
	.249 (Model 2)				
R^2 change	.010				

Attitudes toward women and motherhood and parity

Hypothesis 4c was that participants who had more traditional attitudes toward women and motherhood would have greater numbers of children than women with egalitarian attitudes.

In the first Block, employment and socioeconomic status, and place of residence were the only variables associated independently with parity. Specifically, participants who were in paid employment, lived in a major city and/or in a place of socioeconomic advantage had fewer children.

In the second Block, attitudes toward women and motherhood were also significantly associated with parity. Specifically, participants who had more traditional attitudes toward women and motherhood had greater numbers of children even when sociodemographic variables were controlled for. Thus, Hypothesis 4c was supported.

After the variables in Block 1 (sociodemographic characteristics) have been entered, the overall model explains 24.8% of the variance. After attitudes toward women and motherhood (Block 2) have been included the model as a whole explains 25.8%. Thus, attitudes toward women and motherhood explain an additional 1.0% of the variance in parity even when the effects of sociodemographic characteristics are controlled for.

The model as a whole is significant [$F(6, 520)=30.13, p<0.0001$].

5.6.3 Summary

The regression analyses revealed that attitudes toward women and motherhood were related to women's ideal number of children and parity even after the effects of employment status, religious affiliation, educational status, place of residence and socioeconomic status were controlled for. Therefore, hypotheses 4a and 4c of the study were supported. Similar to other research (Scott and Morgan 1983: 902, Gerson et al. 1984: 439, Kaufman 2000, Moors 2003), this study has shown that women who desired and had larger numbers of children held significantly more traditional attitudes toward women and motherhood than women who did not have children or who had and desired smaller numbers of children. However, no significant relationship between attitudes toward women and motherhood and motherhood status was found when sociodemographic factors were controlled for indicating no significant difference in the attitudes of mothers and childless women. Accordingly, the findings suggest that it is not motherhood status per se which is associated with attitudes toward women and motherhood but the actual number of children a woman wants and has. This finding also indicates a more universal desire or motivation for motherhood.

This relationship is consistent with theoretical explanations of women's childbearing behaviour which identify attitudinal factors as influential. Miller (1994) argues attitudes toward women and motherhood, that are more or less compatible with having children affect the strength of childbearing desires and childbearing itself. It appears that childbearing has different meanings for women with traditional and egalitarian attitudes toward women and motherhood. Women with traditional attitudes view motherhood as central to their lives and identity whilst egalitarian women regard motherhood as only one part of their lives and identity (Kaufman 2000: 131). However, it appears that most women, regardless of their views toward women and motherhood, still aspire to be mothers themselves.

The Attitudes toward Women and Motherhood Scale provides a useful measure of attitudes toward women and motherhood which is relevant to contemporary Australian women. The Scale has internal reliability and preliminary validity. The relationships between attitudes toward women and motherhood and women's

childbearing desires and outcomes found using the scale are consistent with prior research (Scott and Morgan 1983: 912, Nock 1987, Kaufman 2000, Moors 2003) and readily interpretable. The high completion of the Scale (95.4%) suggests its acceptability and salience for Australian women. However, to test the scale's sensitivity or acceptability to the attitudes of women of other ages or to men, it needs to be used with diverse samples. Comparison with other attitudes toward women and motherhood scales in a single sample would also provide additional evidence of its properties. The scale has been designed to be used in a particular socio-historical context. Given recent changes in public attitudes about women's roles and behaviour (Spence and Hahn 1997: 30, Brewster and Padavic 2000: 483), the relevance of the scale would need to be reviewed before it could be confidently used with future generations.

The results suggest that attitudes toward women and motherhood are salient factors in Australian women's childbearing behaviour particularly in relation to how many children a woman wants and has.

5.7 HEALTH

Little is known about the relationship between women's health, including both past illness and current health status, and their childbearing desires, outcomes and expectations. Medical conditions including chronic illnesses (such as diabetes, epilepsy, asthma or multiple sclerosis), diseases (such as cancer or sexually transmissible infections), infertility (both male and female related infertility) and mental illness, may restrict or influence childbearing desires, outcomes and expectations. This study investigated the relationship between women's self reported health status and their current motherhood status (that is, whether participants had children or not) and their desires and expectations about having children.

5.7.1 Health measures

5.7.1.1 General health status

The SF-12v2 Health Survey (Medical Outcomes Trust 2002) was used to assess the participants' general health status. The SF-12v2 is a self report measure of health

status for the previous four weeks consisting of twelve questions which use five choice response scales and produce two distinct summary measures representing physical and mental health, the Physical Component Summary (PCS) and the Mental Component Summary (MCS). Higher scores indicate a better health state. PCS and MCS scores were able to be calculated for 97.7% (n=556) participants.

The suitability of the SF-12v2 as a measure of physical health for the pregnant women appears to be limited. Many pregnant participants commented that their responses to the PCS items reflected their current pregnancy status and were not indicative of their ‘normal’ physical health state. For example:

“I am 34 weeks pregnant, my energy levels have dropped and I have had to delegate housework and limit my daily activities. I have answered your questions as an expectant mother.” [34 year old woman pregnant with first child]

“[My responses] relate to me being 30-34 weeks pregnant and should be interpreted as such!” [32 year old woman pregnant with first child]

“[PCS items] are answered this way because I am 28 weeks pregnant. Normally when I am not pregnant I am extremely fit and healthy and would have a lot of energy.” [30 year old woman pregnant with second child]

Pregnant participants’ mean PCS scores (M=49.4, SD=8.8) were significantly lower than non pregnant participants’ scores (M=55.1, SD=6.9) [t(554)=4.8, p<0.0001]. Therefore, it was decided to exclude pregnant participants’ (n=59) PCS scores from the analyses given that they did not appear to represent their normal physical health status. The purpose of including the SF-12v2 in this study was to assist with investigating the association of (‘normal’) health status to childbearing outcomes.

Table 5.25 Participants’ general health status

	Sample				US Norms	Sig
	Min	Max	Mean	Std	Female 25-34 yrs*	
PCS (n=497)	18.2	70.3	55.1	6.9	52.7	p<0.0001
MCS (n=556)	4.5	63.1	46.0	10.8	47.2	p=.008

* Ware (2002)

There are no normative Australian data available for the SF-12v2. Therefore, the sample's data were compared to US norms for females aged 25-34 years (Ware et al. 2002: 89). The sample's mean PCS score is significantly higher than the US norms indicating better physical health status. This difference may be attributable to the generally high socioeconomic status of the participants. Avery et al. (2004: 76) found significant difference in PCS scores (SF-12v1) of South Australian females aged 25-34 years by socioeconomic status (as measured by SEIFA). Socioeconomic position was associated with significantly higher PCS scores. Compared to the US normative data, the sample's mean MCS score is significantly lower indicating poorer mental health status (Ware et al. 2002: 8).

The SF-12v2 also includes a measure of self assessed health status. Participants were asked to rate their health status on a five point scale of excellent, very good, good, fair and poor.

Table 5.26 Participants' self rated health status

Health Status	Sample (n=569)	Aust. Females (25-34 yrs)*
Excellent	25.0%	25.9%
Very good	44.5%	39.9%
Good	25.0%	26.3%
Fair	5.3%	6.5%
Poor	0.4%	1.5%

* Australian Bureau of Statistics (2006c)

There was no significant difference in the proportion of participants who rated their health as 'excellent' or 'very good' than women aged 25-34 years from the general Australian population surveyed in the National Health Survey (69.4% versus 65.8%, $p=.062$) (Australian Bureau of Statistics 2006c: 18).

5.7.1.2 Life satisfaction

Diener et al.'s (1985) Satisfaction With Life Scale was used to measure the participants' satisfaction with life. However, in order to make the scale consistent with others in the questionnaire a five-point Likert scale instead of Diener et al.'s original seven-point scale of strongly agree to strongly disagree was used. Possible scores on the scale ranged from 5 to 25. High scores indicated greater life satisfaction.

The scale had a Cronbach's alpha coefficient of .89 for this study. The scale was therefore considered to be reliable with this sample. In order to test the construct validity of the scale, the relationship between life satisfaction and subjective wellbeing (as measured by the PWI) was investigated. It was hypothesised that if the life satisfaction scale had good construct validity there would be a positive correlation between the two variables. As hypothesised, there was a strong, positive correlation between the two scales [$r= 0.7$, $n=534$, $p<0.0001$], with high life satisfaction scores (that is, greater life satisfaction) associated with high PWI scores (that is, greater subjective wellbeing). The International Wellbeing Group (2005) report a similar correlation of 0.78 between the PWI and Diener et al.'s (1985) Satisfaction With Life Scale.

The participants' scores for these questions ranged from a minimum of 5 to a maximum of 25, with a mean of 18.2 and a standard deviation of 4.3.

A further three items were included in the questionnaire in order to measure participants' satisfaction with their relationships with their partner and children, and being a mother. These relationships were not specifically measured in the Satisfaction With Life Scale or the Personal Wellbeing Index. These items used the same scale as the PWI, with low scores indicating dissatisfaction and high scores indicating satisfaction. The possible range of scores was 0 to 10. Participants who did not have a partner or who were not mothers did not answer these questions and were excluded from the analyses. The scale had a Cronbach's alpha for this study of 0.88.

Table 5.27 Participants' satisfaction with partner, motherhood and children

Satisfaction with:	Min	Max	Mean	Std
Relationship with partner (n=433)	0	10	8.3	2.4
Being a mother (n=337)	0	10	8.6	2.2
Relationship with children (n=329)	0	10	8.8	2.1

A small number of participants did indicate that they were completely dissatisfied with their relationship with their partner (n=9, 3.9%), being a mother (n=9, 2.5%) and their relationship with their children (n=9, 2.7%). Nevertheless, the sample's mean

scores are high indicating participants' generally high satisfaction with their relationships with their partners and children, and being a mother.

5.7.1.3 Subjective wellbeing

The participants' current level of subjective wellbeing was assessed using the Personal Wellbeing Index (PWI). The PWI measures the average level of satisfaction across seven aspects of personal life: health, personal relationships, safety, standard of living, achievements, community belonging, and future security. The seven item scores are standardised into units of a 0 to 100 point distribution. The domain scores are aggregated and averaged to form the Personal Wellbeing Index which constitutes a measure of subjective wellbeing (International Wellbeing Group 2005). Higher scores indicate a higher level of subjective wellbeing. In this study the Cronbach alpha coefficient was 0.88.

Examination of the raw PWI data revealed that several participants had very low scores on all seven domains. There was concern that these participants may have completed the PWI incorrectly (the Likert scale for the PWI ran in the opposite direction to the scale for the preceding life satisfaction scale). Therefore, consideration was given to excluding participants' PWI scores from the analyses if they were not consistent with their life satisfaction scores given the strong correlation which exists between the two variables. Fourteen participants had PWI and life satisfaction scores that did not correlate (that is, they had low PWI scores but high life satisfaction scores). Therefore, the PWI scores of these fourteen participants were excluded from the analyses as they were deemed to be incorrect data because of the questionnaire design and not correct but extreme responses.

Table 5.28 Participants' subjective wellbeing

	Min	Max	Mean	Std	Sig
Sample (n=538)	12.9	100.0	73.2	15.6	
Aust. Total	50.6	99.5	75.0	12.2	p=.007
Aust. Female	51.6	99.8	75.7	12.1	p<0.0001
Aust. Age (26-35yrs)	51.3	97.2	74.2	11.5	p=.125

A PWI score was calculated for all participants except for those who had missing item data (n=17) and had incorrectly completed the PWI (n=14). The sample's mean PWI score is similar to the normative data for people aged 26-35 years in the general Australian population (73.2 versus 74.2 respectively, p=.125) (Australian Centre on Quality of Life 2005).

5.7.1.4 Health conditions

In order to measure the contribution of specific health conditions to women's childbearing desires, outcomes and expectations, the participants' history of medical illness was assessed. Participants were asked to identify from a list specific health conditions they had been diagnosed with or treated for in their lifetime including diabetes, heart disease, low iron, depression, urinary tract infection, sexually transmitted infections, eating disorders, substance abuse and cancer.

Although most participants reported being in good health or better, the majority of participants (n=429, 78.3%) indicated that in their lifetime they had been diagnosed with or treated for at least one of the listed health conditions. The mean number of health conditions was 1.7, and the maximum was seven. Twenty-one (3.7%) participants did not respond to the question.

The most frequently reported health conditions were low iron (n=181, 31.8%), urinary tract infection (n=173, 30.4%) and depression (n=123, 21.6%). In total eleven participants (2.0%) had experienced cancer including uterine, ovarian, breast, cervical and leukaemia. The other major illnesses reported by participants included glandular fever (n=3, 0.5%), obsessive compulsive disorder (n=1, 0.2%), gall stones (n=2, 0.4%), multiple sclerosis (n=4, 0.7%), Graves' disease (n=4, 0.7%), epilepsy (n=4, 0.7%), polycystic ovaries (n=4, 0.7%), Crohn's disease (n=3, 0.5%), irritable bowel syndrome (n=2, 0.4%), chronic fatigue syndrome (n=2, 0.4%) and migraines (n=2, 0.4%). The participants' health conditions were classified according to the International Classification of Diseases (ICD-10) (Australian Bureau of Statistics 2003d).

Table 5.29 Types of health conditions reported by participants

Health Condition – ICD-10 Category	Frequency	Percent
Infectious & parasitic diseases (e.g. Hepatitis)	43	7.6%
Neoplasms (e.g. Cancer)	13	2.3%
Diseases of blood & blood forming organs (e.g. Anaemia)	182	32.0%
Endocrine, nutritional & metabolic diseases (e.g. Diabetes)	37	6.5%
Mental & behavioural problems (e.g. Depression, anxiety)	159	27.9%
Diseases of nervous system (e.g. Epilepsy, migraine)	11	1.9%
Diseases of eye and adnexa (e.g. Blindness)	1	0.2%
Diseases of ear & mastoid (e.g. Deafness)	1	0.2%
Diseases of circulatory system (e.g. Hypertension)	65	11.4%
Diseases of respiratory system (e.g. Asthma)	97	17.0%
Diseases of the digestive system (e.g. Irritable bowel syndrome)	13	2.3%
Diseases of musculoskeletal system & connective tissue (e.g. Arthritis)	11	1.9%
Diseases of genito-urinary system (e.g. Urinary tract infection)	199	35.0%
Symptoms, signs and conditions not elsewhere classified	7	1.2%

The sample had a similar lifetime experience of depression as a randomly selected, representative sample of Victorian women aged 23-97 (21.6% versus 19.2%, $p=.073$) (Jacka et al. 2007).

5.7.1.5 Health service utilisation

In order to investigate the participants' general health status further information was collected regarding the participants' level of health service utilisation. Participants were asked to indicate how many times in the past twelve months they had consulted health practitioners and been admitted to hospital for their own health excluding for pregnancy and childbirth.

Table 5.30 Number of health consultations and hospital admissions of participants

Health Practitioner	0	1 – 2	3 – 4	5 – 6	7 – 8	9 or more	Mean
Family doctor or GP (n=558)	11.4%	43.6%	23.7%	11.2%	2.6%	5.4%	2.4
Hospital doctor (n=505)	73.8%	12.1%	1.9%	0.5%	0.2%	0.2%	0.3
Specialist doctor (n=524)	60.6%	21.1%	4.7%	2.1%	1.1%	2.5%	0.8
Allied health professional (e.g. optician, dentist, physiotherapist, counsellor) (n=521)	27.9%	38.1%	12.5%	3.2%	2.5%	7.4%	1.9
Alternative health practitioner (e.g. naturopath, acupuncturist, herbalist) (n=514)	66.3%	11.2%	4.4%	2.5%	1.8%	4.2%	1.0
Family planning service (n=513)	86.8%	2.8%	0.2%	0.2%	0.0%	0.2%	0.1
Sexual health service (n=516)	88.4%	2.1%	0.0%	0.2%	0.0%	0.0%	0.0
Hospital admission (n=566)	87.2%	10.7%	1.4%	0.2%	0.0%	0.0%	0.2

The mean number of health practitioner consultations (excluding hospital admissions) in the last twelve months was 6.1 with a minimum of 0 and a maximum of 34. Most participants (n=493, 88.4%) had consulted a family doctor or general practitioner (GP) and seventy (12.4%) been admitted to hospital.

Participants who had fewer health practitioner consultations were significantly more likely to have a better health status (Table 5.29).

Table 5.31 Correlation (r) between number of health practitioner consultations and health measures

	PWI (n=455)	PCS (n=466)	MCS (n=466)	Life Satisfaction (n=471)	No of Health Conditions (n=460)
No. of Health Consultations	-.222*	-.306*	-.284*	-.220*	.346*

*p<0.0001

5.7.2 Health and childbearing desires, outcomes and expectations

Hypothesis 5 was that women who have better a health status will be more likely to desire and have (more) children, and expect to have (more) children in the future than women with a poorer health status.

5.7.2.1 Health status and motherhood

One aim of this study was to determine the importance of health factors to women's childbearing outcomes, and so the relationship between participants' health status and their motherhood status was examined.

Table 5.32 Participants' health and motherhood status

Health Measure	Mean Score		95% CI of the difference	Sig
	Mothers	Childless Women		
PCS (physical health status) (n=497)	55.0	55.2	-1.4 to 1.1	p=.811
MCS (mental health status) (n=556)	46.2	45.7	-2.4 to 0.1	p=.601
PWI (subjective wellbeing) (n=538)	74.7	70.7	-6.8 to -1.3	p=.004
Life Satisfaction (n=561)	18.8	17.3	0.8 to 2.2	p<0.0001
No. of Health Conditions (n=548)	1.7	1.7	-0.3 to 0.3	p=.987
No. of Health Practitioner Consultations (n=476)	5.3	7.5	-3.5 to -1.1	p<0.0001
No. of Hospital Admissions (n=566)	0.2	0.2	-0.1 to 0.1	p=.777

Mothers' mean PWI and life satisfaction scores were significantly higher than women who did not have children indicating greater subjective wellbeing and satisfaction with life. Mothers also had significantly fewer health practitioner consultations than women who did not have children suggesting a better general health status. There was not a statistically significant difference in the self rated health status of mothers and women who did not have children [$\chi^2=8.7$, $p=.068$].

Although there was not a statistically significant difference in the number of health conditions mothers and childless women had been diagnosed with or treated for in their lifetime ($p=.987$), mothers were more likely to have a blood disease (as classified by ICD-10) such as anaemia [$\chi^2=9.2$, $p=.002$] or a disease of the circulatory system

(as classified by ICD-10) such as hypertension or heart disease [$\chi^2=15.3$, $p<0.0001$] than childless women. No significant relationships were found between fertility status and number of health conditions or types of health conditions.

It is well established that sociodemographic factors are associated with health status (Avery et al. 2004, Evenson and Simon 2005). For example, people who live in an area of socioeconomic advantage have significantly better mental and physical health than those who live in an area of disadvantage (Avery et al. 2004: 76).

Statistically significant differences were found between the sociodemographic characteristics of mothers and childless women in this study. For example, childless participants were significantly more likely to have a higher level of education; live in an area of greater socioeconomic advantage; be employed; and live in a major city than mothers.

Given these differences in sociodemographic characteristics, two binary logistic regression analyses (Tables 5.31 and 5.32) were conducted to determine if the significant relationships amongst subjective wellbeing, life satisfaction and motherhood status remained when the effects of sociodemographic characteristics were controlled for. In the first block, socioeconomic and employment status, and country of birth were the only sociodemographic variables significantly related to motherhood status. Specifically, women of higher socioeconomic status, women in paid employment, and women born in Australia were less likely to be mothers. Throughout the analyses socioeconomic and employment status retained this significant negative relationship with motherhood status. Country of birth retained a significant relationship with motherhood status only for subjective wellbeing. Life satisfaction and subjective wellbeing, when entered in the second block of the analyses, were significant, indicating that women who had greater subjective wellbeing and life satisfaction were more likely to be mothers. Specifically women who had greater subjective wellbeing were 1.02 times more likely to be mothers than women who had less subjective wellbeing. Women who had greater life satisfaction were 1.08 times more likely to be mothers than women who were less satisfied with life.

Table 5.33 Motherhood status by sociodemographic variables and subjective wellbeing

Independent Variables	B	S.E.	Wald	95% CI for B	p-value	OR
<i>Block 1</i>						
Constant	4.605	.644	51.108			100.007
Employed (paid)	-3.017	.472	40.868	0.02 to 0.12	.000	.049
Affiliated with a religion	-.134	.211	.404	0.58 to 1.32	.525	.874
Post secondary school qualification	-.204	.231	.780	0.52 to 1.28	.377	.815
Live in an area of socioeconomic advantage	-.833	.258	10.457	0.26 to 0.72	.001	.435
Born in Australia	-.707	.372	3.619	0.24 to 1.02	.057	.493
<i>Block 2</i>						
Constant	3.012	.773	15.182			20.335
Employed (paid)	-3.062	.474	40.710	0.02 to 0.12	.000	.049
Affiliated with a religion	-.187	.216	.749	0.54 to 1.27	.387	.830
Post secondary school qualification	-.274	.236	1.349	0.48 to 1.21	.245	.760
Live in an area of socioeconomic advantage	-.908	.263	11.957	0.24 to 0.68	.001	.403
Born in Australia	-.691	.373	3.427	0.24 to 1.04	.064	.501
Subjective wellbeing	.024	.007	11.955	1.01 to 1.04	.001	1.024

'Goodness of fit' tests indicate support for the model: $\chi^2(6)=121.53$, $p<0.0001$, Hosmer and Lemeshow test $\chi^2(8)=5.92$, $p=0.657$

Cox & Snell R Square = 0.214 and Nagalekerke R Square = 0.290 suggesting that between 21.4% and 29.0% of the variability is explained by this set of variables.

The model correctly classified 67.9% of cases overall (an improvement of 61.2% in Block 0).

Table 5.34 Motherhood status by sociodemographic characteristics and life satisfaction

Independent Variables	B	S.E.	Wald	95% CI for B	p-value	OR
<i>Block 1</i>						
Constant	4.765	.644	54.759			117.381
Employed (paid)	-3.136	.471	44.313	0.02 to 0.11	.000	.043
Affiliated with a religion	-.060	.208	.084	0.63 to 1.42	.772	.941
Post secondary school qualification	-.183	.228	.642	0.53 to 1.30	.423	.833
Live in an area of socioeconomic advantage	-.877	.260	11.357	0.25 to 0.69	.001	.416
Born in Australia	-.798	.370	4.658	0.22 to 0.93	.031	.450
<i>Block 2</i>						
Constant	3.168	.725	19.076			23.751
Employed (paid)	-3.165	.475	44.396	0.02 to 0.11	.000	.042
Affiliated with a religion	-.111	.214	.267	0.59 to 1.36	.605	.895
Post secondary school qualification	-.280	.236	1.412	0.48 to 1.20	.235	.756
Live in an area of socioeconomic advantage	-1.019	.269	14.365	0.21 to 0.61	.000	.361
Born in Australia	-.770	.373	4.268	0.22 to 0.96	.039	.463
Life satisfaction	.073	.017	18.759	1.04 to 1.11	.000	1.076

'Goodness of fit' tests indicate support for the model: $\chi^2(6)=142.62$, $p<0.0001$, Hosmer and Lemeshow test $\chi^2(8)=2.690$, $p=0.952$

Cox & Snell R Square = 0.237 and Nagalekerke R Square = 0.322 suggesting that between 23.7% and 32.2% of the variability is explained by this set of variables.

The model correctly classified 68.8% of cases overall (an improvement of 61.4% in Block 0).

5.7.2.2 Health status and parity

This study examined the relationship between the actual number of children participants had (including current pregnancies) and their health status.

There was a significant low, but positive relationship between parity and life satisfaction [$r=0.1$, $n=561$, $p=.002$], and a negative relationship between parity and the number of health practitioner consultations [$r= -0.2$, $n=476$, $p<0.0001$] indicating that life satisfaction and health practitioner consultations are associated with parity.

Similar to motherhood status, there was a statistically significant difference by parity in the likelihood of having a blood disease or disease of the circulatory system (as classified by ICD-10). Mothers of two or more children were more likely to have a blood disease [$\chi^2=12.5$, $p=.002$] or disease of the circulatory system [$\chi^2=16.4$, $p<0.0001$] than mothers of one child or childless women.

5.7.2.3 Health status and childbearing desires

Ideal number of children

The relationship between the participants' health status and their desires about having children was explored in order to determine if women's health status influences the number of children they consider ideal.

There was a small positive correlation between life satisfaction and ideal number of children with greater levels of life satisfaction associated with higher numbers of desired children [$r=0.1$, $n=542$, $p=.007$].

Future childbearing desires

The age range of the participants (30-35 years) and the current trend in Australia towards childbearing at later ages (Australian Bureau of Statistics 2003c), makes it unlikely that most would have completed their childbearing. In order to determine the impact of health factors on women's decisions about having more children than they currently have, the relationship between the participants' health status and their desire to have (more) children in the future was explored.

There was a small positive correlation between life satisfaction and future childbearing desires [$r=0.1$, $n=568$, $p=.010$], with higher levels of life satisfaction associated with greater desire to have (more) children in the future.

5.7.2.4 Health status and childbearing expectations

In order to understand how health factors may affect women's expectations about having children in the future, the relationship between the participants' health status and the likelihood of them having (more) children in the future was examined.

Participants who had a better mental health status [$r=0.1$, $n=556$, $p=.003$], a smaller number of health conditions [$r= -0.1$, $n=548$, $p=.037$] and greater life satisfaction [$r=0.2$, $n=561$, $p<0.0001$] were significantly more likely to think they would have (more) children in the future. Also, participants who rated their health as excellent were significantly more likely to think they would have (more) children in the future ($M=6.0$, $SD=3.4$) than women who rated their health as fair or poor ($M=5.3$, $SD=3.6$) [$F(1, 567)=5.2$, $p=.023$].

5.7.3 Summary

Overall, the results suggest that participants' health status, especially their global emotional wellbeing, is related to their childbearing desires, outcomes and expectations. Participants who had greater life satisfaction and subjective wellbeing were more likely to be mothers, currently have more children, have a higher ideal number of children, and desire and expect to have (more) children in the future. It appears that women would have (more) children if their health status were different, and that women who have poorer emotional wellbeing may adjust or lower their childbearing desires and expectations in line with their health status. However, it is also possible that other factors constraining their childbearing are associated with lower emotional wellbeing.

There is ongoing debate regarding whether the childbearing years are a time of increased risk for mental health conditions in women (Scott and Alwin 1989: 484, Scottish Intercollegiate Guidelines Network 2002: 3, Robertson et al. 2004: 289). Comparisons of the mental health of mothers and childless women have inconsistent findings. Motherhood has been associated with enhanced mental health for women

(Nomaguchi and Milkie 2003), whilst others have found that mothers' mental health status either does not significantly differ (Wethington and Kessler 1989, O'Hara 1995, Nielsen Forman et al. 2000) or is significantly worse (Pope 2000, Evenson and Simon 2005) from that of women who do not have children. However, these results suggest that being a mother is associated with enhanced mental health for women, and challenge the view that the childbearing years are a period of diminished psychological wellbeing for women (McLanahan and Adams 1984, Pope 2000, Evenson and Simon 2005).

The likelihood of having (more) children in the future, as well as being related to global emotional wellbeing, is also associated with better mental health status and self rated health status, and fewer health conditions. Accordingly, it may be that women's current overall health status influences their childbearing expectations.

Although these findings indicate that women who have good global emotional wellbeing are more likely to have, and desire and expect to have (more) children in the future, it should be noted that this is cross sectional data. Therefore, it is only possible to show an association between women's global emotional wellbeing and their motherhood status and childbearing desires, outcomes and expectations, and not demonstrate a causal relationship or the direction of the effect.

5.8 FACTORS ASSOCIATED WITH WOMEN'S CHILDBEARING OUTCOMES

This study investigated the contributions of psychosocial and health factors to women's childbearing outcomes, in particular the factors which: were salient in women currently not having children; associated with women having their first and subsequent children; and are likely to be important in women's decisions about having or not having children in the future.

5.8.1 Factors important in women currently not having children

Almost 40% of the sample did not have children. However, only twenty (3.5%) participants said they definitely did not want to have children. This section examines the factors associated with participants currently not having children.

Principal components analysis (PCA) was performed on the list of 50 psychosocial and health items in the questionnaire in order to identify the groups of factors associated with participants not having children at the time of the survey. Assessment of the suitability of the data for factor analysis, the scree plot, parallel analysis and the full set of component loading scores for all items across the six components are shown in Appendix 9. The PCA identified six components which accounted for 53.8% of the variance (Table 5.33).

Table 5.35 Key features of Principal Components Analysis of factors associated with nulliparity

Component	% Variance Explained
Health	13.8%
Interest in Motherhood	11.0%
'Lifestyle'	8.9%
Partner	7.3%
Paid Employment/Education	7.2%
Housing	5.7%
Total	53.8%

Component 1 was labelled 'Health'. Twelve items loaded high on this component and reflected particular health problems which may affect a woman's ability to have or care for a baby. For example, 'I have a health condition which could affect my baby's wellbeing'. Component 2 was labelled 'Interest in Motherhood' and included nine items such as 'the idea of having and raising children isn't attractive to me'. Component 3 was labelled 'Lifestyle' and included nine items such as 'having children would affect my current lifestyle negatively'. Component 4 was labelled 'Partner' and included six items which reflected issues to do with the participants' partners including 'my partner does not want to have children'. Component 5 was labelled 'Paid Employment/Education' and included ten items such as 'I do not have a secure job'. Component 6 was labelled 'Housing' and included four items such as 'I want to reduce my house mortgage before I have children'.

The findings show that multiple factors contributed to participants currently not having children. Adverse health conditions, a lack of interest in motherhood, lifestyle

issues, partner concerns, employment matters and housing conditions were regarded by the participants as the most important factors. The results suggest that many of the factors which were salient in women not having children were actually barriers to childbearing.

5.8.1.1 Relative importance of the factors associated with nulliparity

A mean score was calculated for each component identified in the PCA (Table 5.36).

Table 5.36 Component statistics (nulliparity)

Component	Min	Max	Mean*	S.D.
Health (n=215)	1.1	5.0	4.7	0.7
Interest in motherhood (n=218)	1.0	5.0	4.2	0.9
Lifestyle (n=218)	1.1	5.0	3.3	1.0
Partner (n=217)	1.0	5.0	4.3	1.0
Paid employment/education (n=217)	1.5	5.0	4.1	0.7
Housing (n=213)	1.3	5.0	3.9	0.9

* Participants were asked to rate how important each item was in their childbearing outcomes on a five-point Likert scale of 'very important' (1) to 'not at all important' (5). As a result, a higher mean score indicates that the component is less important in childbearing outcomes.

A series of paired t-tests were conducted to determine the relative importance of the components identified to be associated with women not having children. The results of the paired t-tests are shown in Appendix 9. A significant difference was found between all the component mean scores except for 'Paid employment/education' and 'Interest in motherhood' ($p=0.239$) suggesting that the relative importance of these two components is similar.

The results indicate that the relative importance (ranked from most important to least important) of the factors associated with not having children is: 1. 'Lifestyle'; 2. 'Housing'; 3. 'Paid employment/education' and 'Interest in motherhood'; 4. 'Partner'; and 5. 'Health'.

5.8.1.2 Barriers to childbearing

Adverse health conditions

Adverse health conditions had restricted and influenced the participants' childbearing outcomes in a number of ways including: treatment for a medical condition causing fertility problems; medications taken being contraindicated for use during pregnancy; and concerns about how a pregnancy could affect the course of a health condition, the possible effects of the health condition on the wellbeing of a baby, the likelihood that a health condition could be inherited by a baby, and how a health condition may affect caring for a baby. The following three participants' comments illustrate concerns participants had about passing on their health condition to child.

"I got diagnosed two months ago with multiple sclerosis. I have now made my heart-breaking decision not to have children ... [as I am] concerned [about] passing on my genetic disease ... [and] burdening a child with [my] health issues." [woman without children aged 30 years]

"My partner has a condition which could be inherited by my baby." [woman without children aged 30 years]

"A factor which has a great influence on me is a genetic disorder (chromosomal abnormality) which was passed to me from my mother (we are both considered 'normal') but the risk factor of children with abnormalities is high." [woman without children aged 33 years]

Two women described their concerns regarding how their health condition may affect their ability to be a mother and cope with a child.

"As of today I haven't had children due to being diagnosed about seven years ago with obsessive compulsive disorder." [woman without children aged 34 years]

"I doubt my ability to be a mum – as I occasionally suffer from depression." [woman without children aged 31 years]

Not surprisingly fertility problems were also important determinants in women's childbearing outcomes. Women who had a health condition still wanted children but often had difficulties conceiving. Two participants commented as follows:

“Removal of one tube has made falling pregnant slightly difficult.” [woman without children aged 31 years]

“The only reason I don’t have children yet is undiagnosed problems causing numerous miscarriages. I want children. I have been trying to have children for 2 ½ years.” [woman without children aged 33 years]

Lack of interest in motherhood

Media and social commentators often assume that contemporary women of childbearing age have a lack of interest in motherhood and this explains why women delay or do not have children (Saltau 2001, Tchekmeyan 2001, Gooch 2005). However, a lack of interest in motherhood was not reported by the majority of women in the sample. Most participants wanted children. Only a very small number of participants (n=20) did not want to have children indicating that voluntary childlessness is very uncommon. It was only the participants who indicated that they definitely did not want children who commented that a lack of interest in motherhood and children had been a contributory factor in their childbearing outcomes. Comments from three women follow.

“I don’t like children.” [woman who was certain now she did not want children aged 32 years]

“I want many things in life – having children isn’t one [of them].” [woman who has never wanted children aged 34 years]

“[I have] no maternal instincts ... [I] never have wanted or thought about children.” [woman who has always been certain she did not want children aged 32 years]

Partner relationship

The results also show an association between childlessness and marital status. Women in the sample who did not have children were less likely to be partnered than women who were mothers. Partner concerns were important reasons many participants gave for not having children. These concerns included not only the lack of a partner but also an unstable relationship with their partner, their partner not wanting children or being unwilling to help raise children. Comments from four participants illustrate these factors:

“My decisions so far in regards to childbearing have been singly influenced by circumstance. I am not in a committed-married relationship therefore I do not believe me to be in a position to bear children. I would hope in the future (sooner rather than later) that circumstances will change, at which time I will look forward to bearing children.” [woman without children aged 32 years]

“Rather than having made a conscious decision to not have children, it’s really been lack of opportunity. I am very committed to having children one day with the right person, but after a couple of unsuccessful relationships, I still haven’t met the right person to do that with. At this stage of my life I’m still holding out hope that I’ll meet someone to raise a family with – I’m not ready to parent on my own.” [woman without children aged 32 years]

“I love children but am feeling very anxious about having them. I am 33, have been in a relationship with my partner for eleven years but feel very concerned about having children. The reasons for this are our relationship ... we have a lot of problems ... I don’t want children to grow up with parents who fight a lot (like my parents did) ... If my relationship with my partner was perfect I think I might feel differently???” [woman without children aged 33 years]

“By my late 20s to 33 yrs I was thinking that the possibility of having children was limited because I wasn’t in a relationship. I was not keen to have children on my own ... Now that I’m in a stable relationship, there is a possibility of having children. However, I do want to know that I will continue to be in a committed relationship and that my partner is keen to start a family before I embark on that path. My partner is younger than me, and at his age I never contemplated having children. So I want to be sure that he’s also comfortable with the idea before we start our family. Before I met my current partner, all the men I came across before (and who were typically my age) were real lads – interested in having fun but not keen on settling down, having children. ... I feel that often it is women who get the blame for not having children earlier. But it’s the men that have a huge role in delaying that process.” [woman without children aged 34 years]

‘Lifestyle’ factors

‘Lifestyle’ factors also contributed to women not having children. This was often expressed by participants in terms of the restrictions that having children would have on their current lifestyle. Two participants, both of whom were ambivalent about having children, commented as follows.

“I am still uncertain if I want children as I have a great lifestyle and not sure if I’m willing to change it for a child.” [woman without children aged 34 years; ambivalent about having children]

“I feel that a child/children would impair my career and cramp the lifestyle I live. I like travelling and going out.” [woman without children aged 33 years; ambivalent about having children]

Employment concerns

Concerns about the impact of children on participants’ paid employment were identified as a salient factor in women not having children. Comments from two participants are as follows:

“I want to have children but chose not to just yet as I feel that it would prevent me from exploring career options.” [woman without children aged 32 years]

“[I will only have children] when [my] business is established enough and financially secure.” [woman without children aged 31 years]

Housing matters

Housing concerns and aspirations were influential in women’s childbearing outcomes, in particular having a suitable home was identified by many participants as a prerequisite to having children. Comments from two participants follow.

“[We] would need to relocate to bigger premises [before having children].” [woman without children aged 34 years]

“[I would want the] balance of [our] home renovation to be completed prior to losing second income [from having children].” [woman without children aged 34 years]

Multiple Factors

The above sections reflect the individual factors identified by the PCA. However, the findings also indicate that women’s childbearing outcomes are complex and often involve multiple factors. Comments from four participants follow.

“I’m more uncertain than ever about having a child. Yet something keeps niggling at me (hormones most likely!) that it’s time to have a child. Unfortunately, just as I’m beginning to be OK with the ideas of kids, my husband isn’t interested. It is affecting my marriage, as fertility wise, I’m running out of time, and again, due to the chance

of disability, I won't conceive a child after the age of 35-36 years." [woman without children aged 30 years]

"I enjoy children but they are very demanding. I worry about quality of life and passing on medical conditions ... I actually feel selfish choosing not to have children to enhance my quality of life." [woman without children aged 32 years]

"My biggest deterrents [to having children] are lack of extended family support, lack of a stable home (still travelling for pleasure and partner's work). Confidence is lacking – I question my ability to cope ... Maybe I'm not that maternal." [woman without children aged 33 years]

"Financial issues, finding the right partner and completing a PhD were the reasons for not having children earlier. Now fertility issues are of concern (i.e. miscarriages). I have also been concerned about our collective future in terms of conflicts over scarce resources and environmental collapse which makes the decision to have children seem irrational and possibly selfish." [woman without children aged 34 years]

5.8.1.3 Summary

A range of reasons are associated with participants currently not having children including poor health, not having a partner or having an unstable relationship with their partner, and job insecurity. Many of the reasons women identified as salient in their childbearing outcomes are obstacles which have prevented them from achieving their ideal reproductive desires. The results suggest that women who do not have children do not always choose to be child free. It appears that a number of factors limit women's voluntary choice in childbearing outcomes. As one participant commented "circumstances are the only reason that I don't have children – I want them desperately and always have" [woman without children aged 34 years].

5.8.2 Factors important in women having their first child

This section examines the factors which were associated with participants having their first child. Participants who had at least one child or were pregnant with their first child were asked to indicate the importance of a number (37) of psychosocial and health factors having their first child.

Principal components analysis (PCA) was conducted on the list of 37 psychosocial items in the questionnaire in order to identify the groups of factors which contributed to women having their first child. Assessment of the suitability of the data for factor analysis, the scree plot, parallel analysis and the full set of component loading scores for all items across the four components are shown in Appendix 10. The PCA identified four components which accounted for 51.8% of the variance (see Table 5.34).

Table 5.37 Key features of Principal Components Analysis (first child)

Component	% Variance Explained
Interest in Motherhood	16.0%
Work & Family	13.3%
'Lifestyle'	11.9%
Social	10.5%
Total	51.8%

Component 1 was labelled 'Interest in Motherhood'. Ten items loaded high on Component 1 and included factors such as 'I like children', 'I always wanted children', and 'I thought I would make a good mother'. Ten items loaded on Component 2 which was labelled 'Work and Family' and included items such as 'I have access to good quality and affordable child care', 'I have a 'family friendly' employer', or 'I am able to manage paid work and care for children'. Ten items loaded onto Component 3 which reflected 'Lifestyle' factors including 'I am financially secure', 'I have finished travelling', or 'I have bought a house'. Component 4 was labelled 'Social'. Seven items loaded on Component 4 and included issues such as 'I want to carry on my family line', 'children are consistent with my religious beliefs', or 'my friends are having children'.

It is interesting to note that 'my pregnancy was unplanned' was a factor which loaded onto Component 4 'Lifestyle'. Almost a fifth (19.6%) of mothers indicated that an unplanned pregnancy was an important contributor to having their first child. It is difficult to compare this result to the number of unintended pregnancies in the general population as pregnancy intention data are not routinely collected in Australia.

However, in Wave 5 (2005) of the Household, Income and Labour Dynamics in Australia (HILDA) Survey mothers were asked about the ‘intendedness’ of their most recent pregnancy: 64.7% of pregnancies were intended, 16.5% were mistimed, and 16.3% unwanted (England et al. 2008). Maher et al. (2004) report in their qualitative study of fertility decision-making in Victoria that almost half of the first pregnancies to participants with children were described as either totally accidental or occurring much earlier than had been intended.

Although not specifically tested in this study, only three mothers out of the twenty-eight in Maher et al.’s (2004) study who had an unplanned first pregnancy indicated that strong anti-abortion beliefs were the reason for their decision to continue with their pregnancy. Accordingly, it may be possible to assume that despite the unplanned pregnancy the circumstances of the participants in the current study were conducive to having a child otherwise the pregnancy might have been aborted.

The findings show that multiple factors contributed to women having their first child. An interest in motherhood, being able to manage paid employment and family responsibilities, lifestyle factors, and social reasons were regarded by the participants as the most important factors. The factors which were identified by participants as salient in having their first child imply that their circumstances were favourable to having children.

5.8.2.1 Relative importance of the factors associated with having a first child

A mean score was calculated for each component identified in the PCA (Table 5.38).

Table 5.38 Component statistics (first child)

Component	Min	Max	Mean	S.D.
Interest in Motherhood (n=348)	1.0	5.0	2.1	0.8
Work & Family (n=345)	1.2	5.0	3.5	0.9
Lifestyle (n=349)	1.0	4.8	2.9	0.8
Social (n=346)	1.0	5.0	3.8	0.8

* Participants were asked to rate how important each item was in their childbearing outcomes on a five-point Likert scale of ‘very important’ (1) to ‘not at all important’ (5). As a result, a higher mean score indicates that the component is less important in childbearing outcomes.

A series of paired t-tests were conducted to determine the relative importance of the components identified to be associated with women having their first child. The results of the paired t-tests are shown in Appendix 10. A significant difference was found between all the component mean scores.

The results indicate that the relative importance (ranked from most important to least important) of the factors associated with having a first child is: 1. 'Interest in motherhood'; 2. 'Lifestyle'; 3. 'Work and Family'; and 4. 'Social'.

5.8.2.2 'Right' time to have a child

Most comments about the factors which were important in participants having their first child related to participants feeling that it was the 'right time' to have a child, and many stated that this included their partner also being 'ready' to have a child. Comments from four participants follow.

"My husband and I believed it was the right time in our lives. I [had] wanted to wait till I was settled in my life i.e. husband, house." [woman with one child aged 32 years]

"We were ready, had done everything else we needed to do." [woman with one child aged 31 years]

"[My] partner and I [were] 'ready' to have children." [woman pregnant with second child aged 31 years]

"I had done most things I wanted to do at this stage in my life." [woman with one child aged 30 years]

5.8.2.3 Summary

The range of reasons that women gave for having their first child included an interest in being a mother, being able to manage work and family responsibilities, having an established career, and financial security. In contrast to women who did not have children, the reasons participants gave as important in having their first child suggest that there were no (major) constraints or obstacles to their childbearing.

5.8.3 Factors important in women having more than one child

Principal components analysis (PCA) was conducted on the list of 40 items in the questionnaire which were associated with the participants having more children after their first child. Assessment of the suitability of the data for factor analysis, the scree plot, parallel analysis and the full set of component loading scores for all items across the four components are shown in Appendix 11. The PCA identified four components which accounted for 49.3% of the variance (Table 5.35).

Table 5.39 Key features of Principal Components Analysis (subsequent children)

Component	% Variance Explained
Interest in Motherhood	15.6%
Work & Family	13.3%
Social	11.7%
'Lifestyle'	8.7%
Total	49.3%

The four components were labelled as follows: Component 1: 'Interest in Motherhood' which included items such as 'I always wanted more than one child', 'I believe I am a good mother', or 'I want to create a family of my own'. Component 2: 'Work and Family' which included factors such as 'I have a secure job', 'I have an established career', or 'I am able to manage my paid work and care for children'. Component 3: 'Social' which included factors such as 'I believe children will care for you in your old age', 'my friends are having more children', or 'Australia needs more people'. Component 4: 'Lifestyle' which included 'I have paid or reduced my mortgage', 'I am financially secure', or 'I have renovated my house'. 'My pregnancy was unplanned' was also a factor which loaded onto Component 4. Twelve percent of mothers indicated that an unplanned pregnancy was an important contributor to having subsequent children after their first child.

The findings show that multiple factors were associated with women having more children after their first child. An interest in motherhood, being able to manage paid employment and family responsibilities, 'lifestyle' factors, and social reasons were regarded by the participants as important factors. These factors were similar to the factors which were salient in women having their first child, and also indicate that

women’s circumstances have to be optimal before they will consider having more children.

5.8.3.1 Relative importance of factors associated with having more than one child

A mean score was calculated for each component identified in the PCA (Table 5.40).

Table 5.40 Component statistics (subsequent children)

Component	Min	Max	Mean	S.D.
Interest in Motherhood (n=225)	1.0	5.0	2.3	0.7
Work & Family (n=219)	1.0	5.0	3.6	1.1
Social (n=223)	1.8	5.0	4.0	0.7
Lifestyle (n=220)	1.0	5.0	3.4	0.8

* Participants were asked to rate how important each item was in their childbearing outcomes on a five-point Likert scale of ‘very important’ (1) to ‘not at all important’ (5). As a result, a higher mean score indicates that the component is less important in childbearing outcomes.

A series of paired t-tests were conducted to determine the relative importance of the components identified to be associated with women having more than one child. The results of the paired t-tests are shown in Appendix 11. A significant difference was found between all the component mean scores.

The results suggest that the relative importance (ranked from most important to least important) of the factors associated with having subsequent children is: 1. ‘Interest in motherhood’; 2. ‘Lifestyle’; 3. ‘Work and family; and 4. ‘Social’.

5.8.3.2 Circumstances conducive to having more children

Most comments in relation to the factors which had contributed to participants having subsequent children after their first child related to their circumstances being conducive. Comments from six participants follow.

“We were in a position to have more children.” [woman pregnant with fourth child aged 34 years]

“[We have] a secure home.” [woman with two children aged 32 years]

“My first child was easy to look after (sleeping, behaviour etc) and I thought we could cope with more.” [woman pregnant with third child aged 32 years]

“I can take my young baby to work, to enable breastfeeding and caring.” [woman with two children aged 33 years]

“Two children made up a nice family suitable to our income.” [woman with two children aged 30 years]

“Partner and I both agreed to larger family.” [woman pregnant with third child aged 30 years]

5.8.3.3 Didn't want first child to be an only child

Another important reason participants identified for having more children after their first child was because they did not want their first child to be an only child. Comments from three participants follow.

“I was an only child [and it was] very important to me that my first child wasn't an only child” [woman with two children aged 34 years]

“I wanted my child to have a companion (we live rural).” [woman with two children aged 30 years]

“I wanted my first child to have a sibling to play with and love.” [woman pregnant with second child aged 30 years]

5.8.3.4 Summary

Participants gave a range of reasons for having more children after their first child including not wanting their first child to be an only child, job security, access to good and affordable child care, and having paid or reduced their house mortgage. Similar to women having their first child, the results indicate that women's circumstances have to be favourable (that is, no or few barriers to childbearing) before women will consider having more children.

5.8.4 Factors which may contribute to having children in the future

This section examines the factors which participants consider are likely to be important in their decisions about having or not having (more) children in the future. Principal components analysis (PCA) was performed on the list of 25 psychosocial and health items in the questionnaire in order to identify the factors which are likely to contribute to women's future childbearing decisions. Assessment of the suitability of the data for factor analysis, the scree plot, parallel analysis and the full set of

component loading scores for all items across the four components are shown in Appendix 12. The PCA identified four components which accounted for 54.6% of the variance (Table 5.36).

Table 5.41 Key features of Principal Components Analysis (future childbearing decisions)

Component	% Variance Explained
‘Lifestyle’	18.6%
Partner	16.0%
Interest in Motherhood	10.2%
Social	9.9%
Total	54.6%

Nine items loaded high on Component 1 which was labelled ‘Lifestyle’ and included ‘wanting to maintain my current lifestyle’, ‘being able to manage my paid work and care for children’, and ‘wanting to maintain my freedom’. Eight items loaded on Component 2: ‘Partner’ including ‘the stability of my relationship with my partner’, ‘my partner’s willingness to help raise children’, and ‘the effect of children on my relationship with my partner’. Three items loaded on Component 3: ‘Interest in Motherhood’ including ‘my previous experience of being a mother’, ‘my existing care responsibilities’, and ‘I like children’. Four items loaded on Component 4: ‘Social’ including ‘concerns I have about population issues’, ‘concerns I have about the environment’, and ‘my religious beliefs’.

The findings show that multiple factors are associated with women’s decisions to have or not have (more) children in the future. ‘Lifestyle’ matters, partner concerns, an interest in motherhood, and social reasons were regarded by the participants as the most important factors.

5.8.4.1 Relative importance of factors associated with future childbearing decisions

A mean score was calculated for each component identified in the PCA (Table 5.42).

Table 5.42 Component statistics (future children)

Component	Min	Max	Mean	S.D.
Lifestyle (n=564)	1.0	5.0	2.9	0.9
Partner (n=564)	1.0	5.0	2.4	0.9
Interest in motherhood (n=561)	1.0	5.0	3.0	1.3
Social (n=559)	1.0	5.0	4.1	0.8

* Participants were asked to rate how important each item was in their childbearing outcomes on a five-point Likert scale of ‘very important’ (1) to ‘not at all important’ (5). As a result, a higher mean score indicates that the component is less important in childbearing outcomes.

A series of paired t-tests were conducted to determine the relative importance of the components identified to be associated women having or not having (more) children in the future. The results of the paired t-tests are shown in Appendix 12. A significant difference was found between all the component mean scores except for ‘Lifestyle’ and ‘Interest in motherhood’ ($p=0.589$) suggesting that the relative importance of these two components is similar.

The results indicate that the relative importance (ranked from most important to least important) of the factors associated with having subsequent children is: 1. ‘Partner’; 2. ‘Lifestyle’ and ‘Interest in motherhood’; and 3. ‘Social’.

5.8.4.2 Multiple factors

The participants’ comments indicated that a range of factors were likely to influence their future childbearing decisions.

Paid work and family responsibilities

Participants commented that a number of work and family issues would be important in their decisions about having or not having children in the future. In particular, these were mostly concerns regarding women’s ability to balance their paid work and family responsibilities. Comments from two participants follow.

“I don’t feel that women are encouraged or helped to have a career and children. I am lucky that I can work from home. If I could not work from home as I do, I would think twice about having children/or another child. I believe it is important to many women to maintain their job/career whilst raising children.” [woman with one child aged 33 years]

“One of the biggest dilemmas I have faced is when to have a second child versus promotion at work. My employer is exceptional in many ways and very family friendly (comparatively) but there is still some ‘unspoken’ pressure to be available full time – particularly in reference to moving up in the organisation. The child care I have is excellent also so I feel very lucky but I still have a lot of guilt about leaving my child even though he has settled in very well. Balancing work life is a constant tension and I think I will ultimately have to sacrifice my career or certainly postpone advancement to gain a greater sense of satisfaction/sense of achievement in parenting my child and future children.” [woman with one child aged 32 years]

‘Lifestyle’ and financial considerations

‘Lifestyle’ and financial considerations were identified by many participants as likely to be salient factors in their future childbearing decisions, and these were mostly concerns regarding their ability to maintain their current lifestyle and cope financially with (more) children. Five participants commented as follows.

“The most important thing to influence my decisions to have further children is definitely the money factor and maintaining current lifestyle while having them.”
[woman with one child aged 33 years]

“If we were in a better financial position we would love to have more children. Financially ... we can only manage to have two children. If we were to win Tattsлото we would have more.” [woman with two children aged 33 years]

“In general, I would be more likely to have more children if I could afford to. Paying off a home these days is near impossible on one wage. I would prefer to stay home with my children than work but I can’t afford to. I work part time ... My family is not rich or poor. We are middle of the road. Average wage earners. However this is not enough to support more than two children with a mortgage too. If my mortgage disappeared tomorrow, I’d try for more.” [woman with two children aged 30 years]

“I would dearly love to have five children. However educating children costs so much I can only have one or two.” [woman without children aged 32 years]

“We would need to buy new car [and] house to increase from three to four children.”
[woman with three children aged 33 years]

Partner concerns

Many participants indicated that partner issues were likely to contribute to their decisions to have or not have (more) children in the future, in particular, the willingness of their partner to have and help raise (more) children. Comments from three participants follow.

“I must have a committed husband (which I do have!) [to consider having children in the future].” [woman without children aged 33 years]

“[I am] unable to have [more] children due to a selfish husband. [I] had postnatal depression due to husband not being around due to work commitments ... support is most important and [I] would put it up at number one.” [woman with two children aged 31 years]

“We have three [children] and I would possibly have a fourth if my husband would like another child, as he doesn't it is highly unlikely we will have any more.” [woman with three children aged 33 years]

The work of motherhood

Participants' previous experiences of being a mother and considerations about their current children were mentioned as important factors in future childbearing decisions. Comments from four participants follow.

“My previous experience of being a mother (knowing its HARD WORK).” [woman with three children aged 33 years]

“I don't want to be house bound again with a baby.” [woman with two children aged 32 years]

“The effect of having more children on my relationship with my present children.” [woman with two children aged 33 years]

“My decision not to have another child is based on not having enough time to spend with the two children I already have.” [woman with two children aged 34 years]

Social support

Participants expressed that the level of support they have from others would be influential in their future childbearing decisions. A lack of social support was likely to

prevent participants from having (more) children. Comments from two participants follow.

“Lack of support (parents work). I think it may have been important to discuss support networks e.g. if you have family help. If my mother was retired, I would probably think more seriously about a third child – just to give me a hand occasionally. As magical as it is – it can also be limiting and lonely.” [woman with two children aged 33 years]

“Factors that might influence future decisions about having or not having more children: Isolation – even though the world around you is busy and there is so much to do to keep children healthy and happy, the way we live means that most mums at home experience a degree of isolation.” [woman with two children aged 33 years]

Age

Concerns about their age and its potential to increase the risk of pregnancy and childbearing complications were mentioned by many participants as likely to contribute to future childbearing decisions. Four participants commented as follows.

“[I am] running out of time.” [woman without children aged 32 years]

“My age – potential complications on health.” [woman without children aged 33 years]

“My age – I don’t want to leave it until it is too late. When in my late teens and early 20s I always thought that I would have at least one child before I was 30. This hasn’t happened but I’m not disappointed. Study, work commitments, finding a partner all seemed to have extended the timelines even though my goal to have children stayed the same.” [woman without children aged 31 years]

“I want to have children while I’m still young enough to not have a lot of health risks.” [woman without children aged 31 years]

Health concerns

The participants indicated that health factors were likely to be important in whether or not they had (more) children in the future. These included health concerns for themselves and their children, and fertility problems. Comments from five participants follow.

“[I] had three pregnancies with bleeding complications – a fourth pregnancy would present an unacceptable health risk to my self.” [woman with three children aged 34 years]

“Getting pregnant. I wish I hadn’t waited so long before starting a family. It’s been very stressful trying to get pregnant then finally achieving this, then having a miscarriage. I keep thinking if we’d started our family sooner it would have been easier.” [woman with one child aged 30 years]

“Health risks to future babies (Rhesus disease – Rh antibodies).” [woman with two children aged 34 years]

“I gave birth to twins at 27 weeks 5 days gestation, one of my twins only lived for three days as he had a severe congenital heart defect. This defect was diagnosed at 18 weeks gestation. I would like at least three children but if any future pregnancies resulted in similar defects or complications I might reconsider any further pregnancies ... So that coupled with my fear of future premature labour influences how many children I have.” [woman with two children aged 33 years]

“My health – chronic pain.” [woman without children aged 30 years]

“[I’ve had a] hysterectomy [due to] cancer [in my] uterus [which] came back three times in twelve months.” [woman with three children aged 32 years]

5.8.4.3 Summary

A range of factors were identified by the participants as likely to be salient in their future childbearing decisions including their previous experience of being a mother, the willingness of their partner to help raise (more) children, the financial cost of raising children, and their age and health. The results suggest that participants were more likely to feel they would have (more) children in the future if they felt there were no (major) constraints to childbearing, while women who identified factors which were potential obstacles to childbearing were less likely to think they would have (more) children in the future.

5.9 CONCLUSION

These findings have demonstrated that a wide range of psychosocial and health factors such as attitudes toward women and motherhood, partner concerns, adverse

health conditions and housing matters are associated with women’s childbearing outcomes, and these factors and their relative importance varies by parity.

The factors and their relative importance by parity in women’s childbearing outcomes are illustrated in Figure 5.1. As can be seen, although the salient factors are similar by parity their relative importance differed.

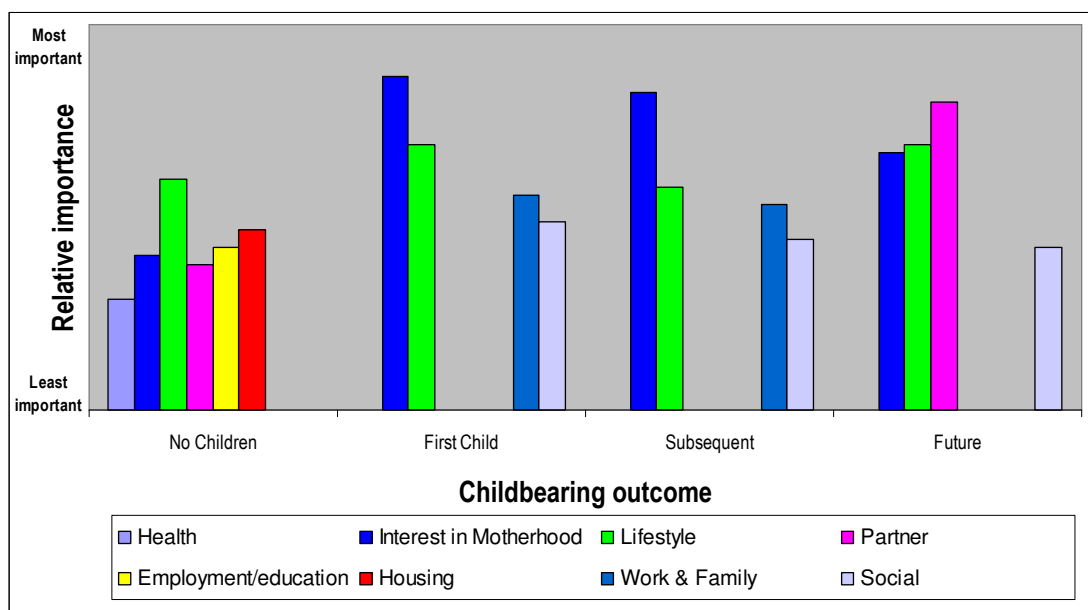


Figure 5.1 Salient factors in women’s childbearing outcomes and their relative importance by parity

Many of the reasons participants identified as salient to their childbearing outcomes were actually obstacles or constraints which prevented them from achieving their ideal childbearing desires. The results show that women often have fewer children than they actually desire, and many would have (more) children if their circumstances were different.

The findings indicate that most women want to have children and voluntary childlessness is very uncommon. In contrast to existing theoretical explanations of fertility decision-making, it appears that it is not always the ‘costs’ of children that are salient in women’s childbearing outcomes. Many of the factors identified in this study

that were important in women's childbearing outcomes were not actually 'costs' but rather women's circumstances such as their poor health, the lack of a partner or an unplanned pregnancy.

It appears that women will have or consider having children if their circumstances are optimal but will not if there are major constraints or barriers to childbearing. Read et al. (2007: 28) similarly concluded that 'childbearing preferences are more likely to come to fruition if circumstances allow this'. Overall these data challenge the prevailing popular view that women's childbearing outcomes are mostly voluntary, and based mainly on factors such as financial considerations or their career development (Weston 2004).

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6 DISCUSSION AND CONCLUSION

The original findings of this study extend knowledge about women's childbearing desires and expectations, and the factors which are important in their childbearing outcomes and likely to be important in their future childbearing decisions. The results indicate that Australian women's childbearing outcomes are multifactorially governed by diverse psychosocial and health factors, and these factors and their relative importance vary for each child women have. The multiple factors found to be salient and their relative importance challenge popular understandings of women's childbearing behaviour and many existing theoretical explanations of fertility decision-making. The results indicate that although most women want to have children they often have fewer children than they desire, and many would have (more) children if their circumstances were different. Thus, women's childbearing outcomes are not always voluntary, and are often constrained or influenced by their actual and perceived circumstances.

6.1 STRENGTHS AND LIMITATIONS

6.1.1 Strengths

The study has a number of methodological strengths that allow generalisation of the findings not permitted by much of the previous research in this field. These include: the random selection of women from the Australian Electoral Roll; a comparatively high survey response; the consideration of the importance of a range of previously under investigated factors in Australian women's childbearing outcomes; and the comparison of mothers and childless women, and women of different parities.

The study compared the childbearing outcomes of women of varying parities from a large, broadly representative, population based sample. The examination of both mothers and women who did not have children allowed investigation of the factors which are salient in women having or not having (more) children.

The study's response (46.7 percent) is higher than that typically achieved by anonymous postal questionnaires sent to general populations, which are usually around 30 percent (Runnion 2001, Bartlett et al. 2008). The good response to the study, and the random selection of women from the Australian Electoral Roll, has allowed examination of the childbearing desires, outcomes and expectations of a diverse range of women. As a result, the sample's reproductive experiences and childbearing behaviour should be expected to fairly accurately represent those of Australian women currently of childbearing age.

The high response to this survey also probably reflects that the questionnaire was of high salience to the participants. Many participants commented that the subject matter of the questionnaire was of great interest and that they had enjoyed participating in the study. For example, one participant wrote "As a woman who is currently 34 weeks pregnant with my first child, I have found this survey to be both fascinating and timely ... it has been interesting to delve into the questions of why I wanted a child, and why I have picked this time in my life to become pregnant".

6.1.2 Limitations

Several limitations of the study need to be acknowledged. For example, the cross-sectional design, which although it allowed data to be drawn from a specified population at a specified time, does not make it possible to determine if the factors which are important in Australian women's childbearing outcomes vary over time as a result of changing circumstances or priorities; or if the women in the sample had completed their childbearing. However, participants were asked about the likelihood of having (more) children in the future and more than half (53.8%) thought it was unlikely that they would have a child or further children in the future.

Furthermore, these cross-sectional data are only able to show associations between the factors investigated and women's childbearing outcomes, and not demonstrate causal relationships or the direction of the effect. For example, in this study an association was found between motherhood and women's mental health status; mothers had better mental health than childless women. However, it is not possible to determine from the study data whether better mental health contributed to women becoming mothers or

was the result of motherhood, that is, did mothers have better mental health prior to having children or did having children enhance women's mental health?

Also, participants' responses represent a retrospective account of the importance of psychosocial and health factors to their childbearing outcomes. The perception of the salience of these factors may have changed over time. However, given that the mothers in the sample mostly had preschool and early primary school aged children and ten percent of the participants were pregnant the effect is likely to be small since the elapsed time between childbirth and being surveyed for most mothers was not great.

It is acknowledged that a limitation of validity for cross-sectional studies using postal questionnaires is non response bias (Alreck and Settle 1995: 35). In general, the greater the response rate, the more representative the data will be of the larger population, which enhances the ability to generalise the results (Gore-Felton et al. 2002: 153). A potential non response bias may exist in the study as the questionnaire might be more likely to have been completed by women with an interest in motherhood, that is, mothers or women who want to have children than those who are less or not interested in becoming mothers. However, given that most Australian women want to have children and the proportion of participants who definitely did not want to have children is consistent with the findings of other large, population based Australian studies (for example, Weston et al. 2004), and the reproductive experiences of the participants were similar to those of women of the same age in the general population this effect is likely to be small.

Another potential source of non response bias may arise from mothers' positive or negative experience of motherhood. It is possible that women who were finding motherhood difficult and experiencing negative mood may not have completed and returned the questionnaire at the same rate as those who were feeling more positive. Nevertheless, the comments made by some participants indicated that they were finding motherhood 'hard work'. Further, the sample had a similar lifetime rate of depression as a representative sample of Victorian women suggesting that effect of such a non response bias is likely to be small.

Although, the sample is broadly representative of women of the same age in the general population, the sample is biased in terms of certain sociodemographic characteristics. Participants in the study were more likely to hold a post secondary school qualification, live in an area of socioeconomic advantage, be employed and not be affiliated with a religion than women of the same age in the general population. Also, the participants were all aged between 30 to 35 years. It is possible that the factors associated with childbearing desires, outcomes and expectations may be different for other women. For example, financial concerns have been found to be related to the childbearing behaviour of younger women of lower socioeconomic status (Lain et al. 2009). As a result, the ability to generalise the findings of the study is limited to women with these sociodemographic characteristics.

The sample was restricted to women from the state of Victoria as the scope of this study did not allow for a representative national sample to be recruited. However, Victorian women are similar to Australian women for several fertility factors such as the median age of giving birth and the proportion estimated to be childless. Nevertheless, there are some differences between Victoria and Australia. Victoria's total fertility rate of 1.87 is slightly lower than Australia's rate of 1.93 (Australian Bureau of Statistics 2008c). Also, approximately 74 percent of Victoria's population lives in major cities in comparison to 66 percent of Australia's population (Australian Bureau of Statistics 2004b). Despite these differences, the childbearing desires and expectations of the participants in this study were similar to those of Australian women in other large, population based Australian studies (for example, Weston et al. 2004).

It is difficult, however, to determine if the psychosocial and health factors identified by the participants as important in their childbearing outcomes are representative of those that are important in Australian women's childbearing outcomes, because the range of factors, and their relative importance, have not been previously examined in a similar way to this study. Despite this, it would be expected that the findings of this study would be generalisable to Australian women as several of the factors identified as salient in childbearing outcomes in this study such as a lack of a partner or an unstable relationship with a partner, and the ability to manage paid employment and

family responsibilities have been identified as important in other large, population based Australian studies (for example, Weston et al. 2004).

Further, the actual number of children that participants expected to have in the future was not investigated in this study. This would have allowed the correspondence between women's ideal, actual and expected number of children to be determined, and how these are related to actual and replacement level fertility rates.

6.2 CONTRIBUTIONS AND IMPLICATIONS OF FINDINGS

These data confirm the findings of several recent studies which have identified that: most women want to have children (for example, Weston et al. 2004); there is often a gap between the number of children women desire and the number of children they actually have with many women having fewer children than they desire (for example, Goldstein et al. 2003, Quesnel-Vallée and Morgan 2003, Weston et al. 2004); and women are more likely to achieve their childbearing preferences if their circumstances are favourable or conducive to childbearing (for example, Schoen et al. 1999, Weston et al. 2004, Read et al. 2007).

Nevertheless, the findings challenge and expand popular understandings of women's childbearing behaviour and current theoretical explanations of women's fertility decision-making by demonstrating that: multiple factors are important in women's childbearing outcomes not just career or financial considerations; women who do not have children do not always 'choose' to be childfree; and women's circumstances are more salient factors in their childbearing outcomes than the 'costs' of having children. Together the findings have implications for policy which aims to address women's childbearing behaviour and Australia's fertility rate.

6.2.1 Understanding women's childbearing behaviour

6.2.1.1 Women's childbearing desires

Even though it is estimated that approximately a third of Australian women will not have children (Australian Bureau of Statistics 1999, Merlo and Rowland 2000, Australian Bureau of Statistics 2002c, Paice 2003), most participants in this study were mothers or wanted to be mothers and only 3.5 percent reported that they

definitely did not want to have children. The findings support those of the Australian Institute of Family Studies' Fertility Decision Making Project (Weston et al. 2004). This finding challenges the assumption often made and discussed in the popular Australian media that women who do not have children have no interest in being mothers (Saltau 2001, Tchekmeyan 2001, Gooch 2005).

Determining why women want children is important in understanding current fertility levels (McDonald 2002b: 7, Weston and Parker 2002), and theoretical explanations of fertility need to address why people have children (Friedman et al. 1994: 376, McDonald 2002b: 6, Hechter et al. 2005: 91, Nauck 2007: 616). Participants in this study were not asked directly about why they wanted to have children or why they thought their desired number of children was ideal. However, the reasons listed in the questionnaire that participants identified as important in having children and their spontaneous written comments indicate that most women wanted children for psychosocial reasons such as 'liking children'; thinking their 'life would be enriched by children'; 'children would be a source of fun, pleasure and pride'; 'fulfilment'; and 'creating a family of one's own'; and additional reasons reported for the second child such as 'enrichment' and 'not wanting first child to be an only child'.

A number of theoretical approaches have been suggested to explain why women want children including: the Value of Children (Hoffman and Hoffman 1973), children as social capital (Schoen et al. 1997) and the structural value of children theories (Bühler 2008). Despite there being no consistent theoretical approach which explains why women want children, this study confirms the findings and assertions of others that the motives for childbearing are multidimensional, and in Western developed countries such as Australia women mostly desire children for psychological and social reasons not financial ones (Edelmann et al. 1994, Kagitcibasi 1997, Kohlmann 2002).

The findings indicate that although most women want children there is a gap between their ideal number of children and actual childbearing, and many women have fewer children than they desire. These findings confirm those of other studies which have investigated the correspondence between fertility preferences and behaviour in other developed countries for example, Goldstein et al. (2003) in Germany and Austria, and Quesnel-Vallée and Morgan (2003) in the USA; and recently in Australia in the

Australian Institute of Family Studies' Fertility Decision Making Project (Weston et al. 2004).

The average ideal number of children (2.6) desired by the participants in this study is higher than the current Australian fertility rate (1.93) and the replacement level fertility rate (2.1). This suggests that Australia's low and below replacement fertility rate is an unintended rather than planned outcome of women's childbearing behaviour, and the current fertility rate is not an accurate reflection of individual women's preferences regarding their ideal number of children. It is possible that this result reflects a non response bias in the study whereby mothers and/or women who had a high interest in motherhood were more likely to respond to the invitation to participate than women who did not have an interest in motherhood or voluntarily childless women. Mothers and/or women who have an interest in motherhood may have a higher ideal number of children than women in the general population. However, given that the reproductive experiences and childbearing desires of the participants are similar to those of women of the same age in another large Australian population based sample (Weston et al. 2004) a non response bias is unlikely to explain these findings.

Further, as has been previously suggested (Morgan 2001, Quesnel-Vallée and Morgan 2003, Hagewen and Morgan 2005), the findings demonstrate that women's childbearing preferences (including their ideal number of children) are not always an accurate indicator of the actual number of children women will have. Therefore, in order to fully understand women's childbearing behaviour, and low and below replacement level fertility it is important to understand the salient factors in women's childbearing behaviour and identify any barriers to women achieving their fertility desires.

6.2.1.2 Women's childbearing outcomes

Career development and financial considerations have frequently been regarded as the primary determinants of women's childbearing behaviour (Weston 2004). However, this study explored the importance to women's childbearing outcomes of multiple factors, some previously under investigated especially in the Australian context.

Biopsychosocial explanatory framework

The findings indicate that a variety of biological, psychological and social factors are associated with women's childbearing outcomes, and these factors and their relative importance varies by parity. A biopsychosocial approach, based on Engel's (1977) biopsychosocial model of illness and disease in which health is understood as a combination of biological, psychological and social factors, provides an explanatory framework for the multiple, complex and interrelated factors which are important in women's childbearing behaviour. Such a framework also demonstrates that the factors associated with childbearing are apparent and interact at individual, familial and societal levels.

Biological factors include an individual's health status in particular, adverse health conditions which impact negatively on fertility and pregnancy. The psychological component of the explanatory framework shows how factors including an individual's attitudes toward women and motherhood, and religious beliefs are related to their childbearing outcomes. Social factors include societal and familial childbearing determinants such as a partner's fertility preferences and behaviours, housing affordability, child care accessibility, and policies aimed at assisting women manage their paid employment and family responsibilities. All these factors reflect women's perceived and actual circumstances, including those which are both conducive and obstacles to childbearing.

Women's circumstances

Much previous research regarding women's childbearing behaviour has examined why women do not have children, and there has been little comparison of the experiences of mothers and childless women, or any investigation of differences by parity. The finding of the importance of circumstances in women's childbearing outcomes assists in explaining both why women do and do not have children, and why they have the number of children they do. It appears that women will have or consider having (more) children if their circumstances are optimal but will not if there are barriers to childbearing.

This finding supports that of Read et al. (2007) who investigated fertility decision-making in a small qualitative study of mothers (n=15) from the Australian state of New South Wales. Although Read et al. (2007) investigated different contributing factors to women's childbearing outcomes from the current study, such as the ease of conceiving and women's perception of their ability to cope with caring for young children, they similarly concluded that 'childbearing preferences were more likely to come to fruition if circumstances allow this' and 'the realities [women] faced in their lives affected the actual number of children they ended up with'. However, the current study enhances the conclusion of Read et al. (2007) by providing empirical evidence for the relationship between a woman's circumstances and her childbearing behaviour in a large population based sample; and demonstrating its existence for both mothers and childless women. Thus, the findings confirm that for many women their childbearing behaviour is affected by their circumstances.

Despite Australian women's access to reliable contraceptives and abortion; and less social stigma and greater social support than in previous generations for single women who are mothers and women who are childless (Australian Bureau of Statistics 1996b:Weston, 2002 #12, Carmichael 1998), these data reveal that women's childbearing outcomes are not always voluntary, that is, a matter of 'choice', and are often influenced by their perceived and actual circumstances, and many women would have (more) children if their circumstances were different.

6.2.1.3 Theoretical explanation of fertility decision-making

There is a lack of a commonly accepted and coherent theoretical framework for understanding fertility behaviour in low fertility countries (Hobcraft 2000: 2, Van Peer 2000: 4). To date, theoretical explanations of low fertility and fertility decision-making have typically emphasised the 'costs' to women of having children, and feature 'choice'. Fertility decision-making has been viewed as a rational, voluntary process in which women have the capacity to choose whether or when they have a child; and assess the costs (both direct and indirect) and benefits of having children, and evaluate the potential rewards of children relative to other goals which may be pursued (Neal and Groat 1980: 222, Liefbroer 2005: 368). If the costs of having a child outweigh the benefits, a woman will 'choose' not to have a child, and if the

benefits outweigh the costs a woman will 'choose' to have a child (Radecki and Beckman 1992: 158).

However, this focus on fertility 'decision-making' suggests an underlying assumption that childbearing behaviour is predominately a matter of individual choice rather than determined by situation and circumstance (Maher and Dever 2004, Weston and Qu 2004: 10). This study has shown that women's childbearing outcomes are related to their circumstances and these often prevent them from actually realising their childbearing desires. Further, many of the factors found to be salient in women's childbearing outcomes were not actually 'costs' to women of having children such as those which have been the focus of many previous investigations and theoretical explanations including the direct costs of food, health care, education and clothing for children, and indirect costs such as loss of income related to time out of the paid workforce caring for children (Callan 1985: Summers, 2003 #32, Weston and Parker 2002).

Participants in this study were asked to indicate the importance of factors which had governed their childbearing outcomes including those related to the 'costs' of having children as well as ones related to their circumstances. This approach allowed a more comprehensive investigation of the determinants of women's childbearing outcomes than has previously been conducted.

An original contribution of this study is the finding that women's circumstances were more important than the 'costs' of children in their childbearing outcomes, and women will have children if their circumstances are favourable but will not if they are not. For example, many participants reported that factors such as their poor health status or lack of a partner were important reasons which had contributed to their current childlessness. As a result, the data suggest that a focus on the 'costs' to women of having children is an inadequate approach to understanding women's childbearing behaviour; and challenge theoretical explanations of fertility decision-making which emphasise 'costs' and consequently, best explain why women do not have children.

The results of this study also indicate that attitudes such as those toward women and motherhood, as well as women's circumstances are associated with Australian women's childbearing desires and outcomes. Participants who had more traditional attitudes toward women and motherhood wanted and had more children than those with more egalitarian attitudes. This relationship is consistent with theoretical explanations of women's childbearing behaviour which identify attitudinal factors as influential. Miller (1994) argues that attitudes, such as attitudes toward women and motherhood, that are more or less compatible with having children affect the strength of childbearing desires and childbearing itself.

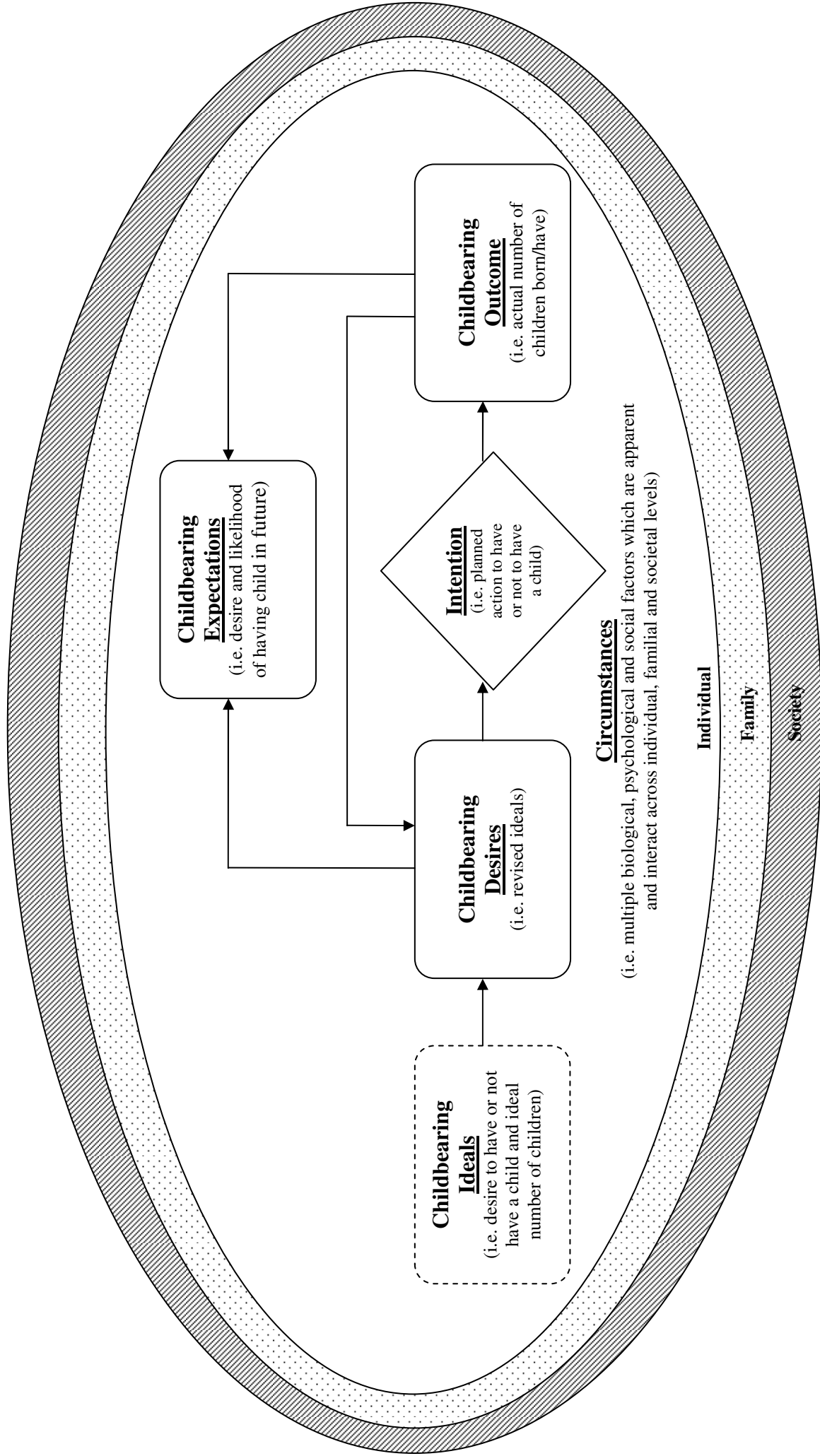
Whether women have or do not have children appears to be the result of their biological, psychological and social circumstances. In order to understand more fully women's childbearing behaviour an alternate theoretical model is required which explains and outlines the process by which women have or do not have children and addresses some of the shortcomings of existing models including explaining why women do have children as well as why they do not, any differences by parity, not assuming that all pregnancies are planned, and incorporating psychological and attitudinal variables.

Multifactorial conceptual framework of women's childbearing behaviour

Based on the results of this study, the following conceptual framework is proposed (Figure 6.1). This framework builds on existing theoretical explanations of fertility decision-making and childbearing behaviour in particular, the theoretical approach of Miller (1994) and Miller and Pasta (1995) discussed in Chapter 2, whose theory outlines the translation of childbearing desires into intentions and the implementation of these intentions into behaviour; and emphasises the role of circumstances in women's childbearing behaviour. However, the framework differs from that of Miller and Pasta's approach in that childbearing ideals are separated from desires in order to recognise that a woman's actual childbearing desires may be influenced by her circumstances. Childbearing expectations have also been added to the model to assist in explaining how future childbearing desires and outcomes may be influenced by a woman's circumstances, and differences in parity outcomes. Furthermore, as argued by Weston et al. (2004) and indicated by the results of this study, the contribution of a

woman's circumstances to each step in the childbearing process, not just intentions as specified by Miller and Pasta, has been highlighted in this conceptual framework.

Figure 6.1 Multifactorial conceptual framework of women's childbearing behaviour



Childbearing ideals

The first step in the conceptual framework is childbearing ideals. Childbearing ideals are the desire to have or not have a child(ren), and the number of children considered to be ideal. Ideals are desires that are essentially removed as much as possible from an individual's circumstances. For example, participants in this study were asked to identify the number of children they would like to have if they could have exactly the number they wanted. It is recognised, however, that ideals may have been subconsciously shaped by factors including social normative influences such as the number of children generally considered to be ideal in the society in which the woman lives; the number of children in her family of origin; or an unexplained drive to have children.

Childbearing desires

It has been suggested that childbearing desires may be influenced or shaped by an individual's circumstances and the likelihood of achieving them (Miller 1994, Weston and Qu 2004: 11). In view of that, childbearing desires, as defined in this conceptual framework, are childbearing ideals which have been constrained or influenced by women's circumstances such as their health and marital status, the number of children they already have, the willingness of their partner to have and help raise children, and the availability of good and affordable child care.

Childbearing intention

This is the step in the process where an individual intends or takes planned action toward having or not having a child which would also include ceasing contraception, the decision to abort or continue an unplanned pregnancy, undertaking fertility treatment or pregnancy screening.

Childbearing outcome

This step is the outcome of the childbearing intention (that is, having or not having a child, and the actual number of children a woman currently has) and is influenced by a woman's childbearing ideals and desires, and her circumstances.

Childbearing expectations

Childbearing expectations are the desire for and likelihood of having (more) children in the future. They are similar to childbearing desires in that they acknowledge a woman's circumstances and their influence on the likelihood of her having (more) children.

Circumstances

Circumstances are the determinants of childbearing identified in this study and outlined in the biopsychosocial explanatory framework discussed in Section 6.2.1.2 which are associated with women's childbearing outcomes. They may be perceived or actual circumstances, and include multiple biological, psychological and social factors which are apparent and often interact across individual, familial and societal levels. They include health status, partner concerns (such as lack of a partner or a partner who does not want to have children), attitudes and beliefs (such as attitudes toward women and motherhood, and religious beliefs), and paid employment factors (such as difficulties being able to manage paid employment and caring for children). Their relative importance may differ by parity.

Example

This conceptual framework of women's childbearing behaviour is most readily illustrated with an example drawn from the comments and responses of a participant in this study. It includes only one 'circumstance'. However, as demonstrated by this study, in reality there are likely to be multiple circumstances which are important in women's childbearing behaviour. Also, this example describes the childbearing behaviour of a woman with multiple sclerosis (MS). Although, it is estimated that only approximately 18,000 Australians have MS (a prevalence of 87 per 100,000), twice as many women as men have MS (MS Australia 2010). This example is used to illustrate the finding of the importance of health factors in women's childbearing. Participants' names were not known to the researcher so a pseudonym has been assigned to the participant in this example.

Mary is a 30 year old nurse who was born in Australia. She has two siblings in her family of origin and is the 'middle' child, that is, she is between the youngest and eldest. She does not regard religion as important in her daily life.

Ideally Mary would like to have three children (childbearing ideal). It is likely that factors such as her family of origin have shaped her preferences about having children and the number of children she would like to have.

However, given her recent diagnosis of multiple sclerosis (MS) (circumstance) Mary is concerned about her ability to care for three children and revises the number of children she would like to have to two (childbearing desire). Mary and her partner plan to have their first child (childbearing intention). The pregnancy is successful and Mary gives birth to a girl (childbearing outcome). A year after giving birth to her daughter, Mary would still like to have another child (childbearing ideal). However, Mary's MS has worsened and the medication she is currently taking is contraindicated for use during pregnancy, and Mary is also concerned that her MS would make it physically difficult for her to care for another child (circumstance). Therefore, even though Mary would like to have more children she thinks that it is unlikely that she will have any more (childbearing expectations) given her current health status (circumstance).

Summary

The proposed multifactorial conceptual framework is designed to assist in understanding women's childbearing behaviour, including having and not having children, and the factors which contribute to it, recognising that such behaviour is not always voluntary or rational. The findings of this study, in particular, the large amount of variance explained in childbearing outcomes by the factors assessed, provide empirical support for the framework. However, it should be noted that as this framework is based on the findings of this study it may only be applicable to women aged in their early to mid thirties from developed Western countries.

6.2.2 Policy implications

Australia currently has a liberal welfare state which focuses on the individual and invests a relatively low proportion of public money into social programs.

There are currently no policies in Australia which have been specifically designed to increase the fertility rate. Nevertheless, there are Australian Government policies

which were designed for social and economic goals such as recognising and assisting families with the cost of raising children, which may have an incidental, albeit modest, effect on the fertility rate (Lattimore and Pobke 2008: xvii).

These include family policies such as the Family Tax Benefits, Baby Bonus and Child Care Benefit. There are two Family Tax Benefits – A and B, which were introduced by the Australian Government in July 2000. The objective of Family Tax Benefit A is to help with the cost of raising dependent children. It is income tested with the entitlement progressively reduced as family income increases. The maximum annual payment for a family with one child under 13 years of age is currently AUD4,460 (Lattimore and Pobke 2008: 53, Centrelink 2010c). This is approximately 7 percent of the average yearly earnings of an adult in full time paid employment in Australia (AUD63,600) (Australian Bureau of Statistics 2010). Family Tax B is also designed to assist with the cost of raising children and is an extra payment for single parents and families with one main income, and is also income tested. The maximum amount is currently AUD3,584 per annum for families where the youngest child is under five years of age (Lattimore and Pobke 2008: 54, Centrelink 2010d).

The Baby Bonus, introduced in July 2004, is a one off payment designed to help with the extra costs of caring for a new baby or adopted child. The Baby Bonus in 2005 (at the time of this study) was AUD3,000. From 1 January 2009 the Baby Bonus has been income tested and the rate increased to just over AUD5,000 (Lattimore and Pobke 2008: 55, Centrelink 2010a).

The Child Care Benefit is designed to help with the cost of child care for long day care, family day care, occasional care, outside school hours care, vacation care and registered care, and was introduced in July 2000. For approved care (such as long day care, family day care, and before and after school care) the child care benefit is income tested. The current maximum payment for one non-school aged child in approved care is AUD3.37 per hour for a maximum of 50 hours week (AUD168.50 per week) (Lattimore and Pobke 2008: 56, Centrelink 2010b).

Interest in fertility from a policy perspective has intensified in Australia recently in correspondence with the debate regarding the potential economic impact of the ageing

of Australia's population (Lattimore and Pobke 2008: iii). In 2002, a Population Summit was held to debate population issues including Australia's declining fertility rate. The Summit was a public forum attended by prominent Australians, politicians, academics, business people, union leaders, school children, community leaders, journalists and population policy experts. It was recommended at the Summit that policies should be introduced to increase the fertility rate, and that, along with good immigration policy, such policies would improve Australia's long term economic prospects (Bracks 2003: 41, Vizard et al. 2003: 13, Withers 2003: 260). However, the Summit's recommendation was not implemented. This was probably due to the Federal Government at the time of the Summit (the conservative Howard Government) being 'a vocal opponent of developing a formal population policy' for Australia (Farouque 2002).

Nevertheless, it has also been claimed that, due to concern regarding low fertility, support for pronatalist policies, specifically aimed at increasing the fertility rate, generally increased in Australia under the Federal Howard Government which left office in 2007 (Heard 2006). Heard (2006) argues that the Howard Government did not pursue fertility policy in its first term. The Government argued that immigration was the 'only practical tool' available to influence population outcomes (Heard 2006: 13). However, by its fourth term, the Government was explicitly pronatalist in its approach to low fertility in Australia arguing that births were a more favourable way to arrest population decline than immigration (Heard 2006: 22).

In addition, the Australian Government reported in the 2007 United Nations' survey of population policies that it considered Australia's fertility level to be too low and policy interventions should aim at raising fertility levels (United Nations 2008). The recent *Families in Australia* report by the current Rudd Federal Government highlights a need for government to 'support families who wish to have children' (Department of the Prime Minister and Cabinet 2008).

It has also been argued that the recent increases in the fertility rate do not negate the need for fertility policy as a lack of policy may result in a decrease in the fertility rate (Lattimore and Pobke 2008: xix). However, the Australian Government's Productivity Commission recently concluded that there were currently no economic grounds for

policy interventions to raise fertility in Australia (Lattimore and Pobke 2008: 96). Accordingly, there is mixed opinion regarding the necessity for policies in Australia which aim to increase the fertility rate.

Nevertheless, if policies were to be introduced by the Australian government which aim to address the fertility rate, on the strength of the findings from this study a number of recommendations can be made regarding the most appropriate areas for policies to target in order to be successful in achieving that aim.

It has been suggested that fertility rates would increase considerably (to around replacement level), if desired family size was actually realised (Philipov et al. 2009: 7). The results of this study indicate that most Australian women want to have children and ideally would like to have at least two or three children (which is above replacement level fertility). However, the findings suggest that women are not fulfilling their childbearing preferences, and many of the factors which are salient in their childbearing outcomes are actually barriers preventing them from doing so. Therefore, if policy which aims to increase the fertility rate is to be successful, it needs to focus on 'enabling' women to have children and removing the 'obstacles' which prevent women from achieving their childbearing preferences. It is, however, recognised that not all of the factors identified in this study which were 'obstacles' or barriers to women's childbearing behaviour (for example, adverse health conditions) may be (currently) modifiable.

The results of this study also demonstrate that the salient factors associated with women's childbearing outcomes are different for each child women have. Therefore, it is important, as argued by others (for example, Kippen 2004, Maher et al. 2004), that policies recognise that the contributory factors to childbearing vary by parity and consequently, enable women not only to have their first child but also facilitate the transition from first to second birth and so on.

According to rational choice theories, fertility decision-making is a function of individual preferences and the cost of children. Therefore, government policies which are aimed at giving parents more income to help cover the cost of raising children should be expected to have a positive effect on the number of children born (Gauthier

and Hatzius 1997, Grant et al. 2006). However, existing evidence suggests that financial policies including those which provide financial incentives to have children have little impact on fertility rates (McDonald 2002b: 15, Philipov et al. 2009: 29). Gauthier and Hatzius (1997) analysed the effect of government support for families on fertility rates in 22 industrialised countries for the period 1970 to 1990. They found that cash benefits in the form of family allowances were positively related to fertility, however, the effect was of a limited magnitude and varied by country.

In Australia, although there are currently no formal policies which provide publically-funded financial incentives to have children, the Baby Bonus has been popularly viewed as being particularly influential on the fertility rate. The former Howard Government claimed in 2005 that the Baby Bonus was responsible for increasing the fertility rate (Associated Australian Press 2005). However, it has been argued that the Baby Bonus is likely to have played only a partial role in the increase in the fertility rate given that it was only one of a package of measures introduced to assist with the costs of raising children (for example, Family Tax Benefit A) (Lattimore and Pobke 2008: 35, Lain et al. 2009: 241). In addition, these policies (especially through the substantial public discussion of the Baby Bonus) may have increased the fertility rate by highlighting the importance to society of motherhood and increasing the value that is placed on children (Gray et al. 2008, Lattimore and Pobke 2008, Lain et al. 2009).

Others have also suggested that the recent increase in Australia's fertility rate may not be entirely due to the Baby Bonus. Lain et al. (2009) evaluated the impact of the Baby Bonus on birth rates in New South Wales. They found that although the Baby Bonus affected the birth rate for second, third or subsequent births, it had a limited impact on first births. The impact also differed among certain subgroups of the population. For example, the increase in second births occurred predominately among younger women of low and average socioeconomic status. Lain et al. (2009) concluded that although there was an association between the Baby Bonus and the fertility rate, the increase in the fertility rate may just represent a change in the timing of births (for example, childbearing plans brought forward), and possibly an increase in family size (although they did not have data regarding women's childbearing preferences). There may also have been other social and economic changes occurring in Australia over the

period examined such as increased economic prosperity that may have affected the fertility rate.

A limitation of Lain et al.'s (2009) study is that they only examined the short term effects of the Baby Bonus. Nevertheless, studies in other countries such as Romania, Poland and France have shown that fertility rate increases occurring immediately after the introduction of financial incentives are not sustained, and higher benefits seem to encourage an earlier timing of births, but not necessarily a larger family size (Grant et al. 2006).

It may be, as this study has demonstrated, that financial concerns are relatively unimportant in women's childbearing outcomes compared to other factors particularly, for the first two children. The participants' comments indicate that financial concerns were only likely to be important in future decisions about having more than two children. Read et al. (2007) also found in their qualitative study of the factors affecting the childbearing outcomes of 15 mothers in regional New South Wales that for about two-thirds of the mothers interviewed, short term financial considerations were not an important factor. However, for most of the mothers in their study long term financial considerations were important for curtailing their total number of children.

Consequently, based on the findings of the current study, the main areas that policy should target and have the most potential to assist women to achieve their reproductive desires are: health concerns, partner fertility attitudes and behaviours, managing paid employment and family responsibilities, and housing aspirations and affordability. These factors, although differing in relative importance, were identified as important in all parity outcomes as well as decisions about having children in the future. The other determinants identified in this study as important in women's childbearing outcomes such as 'interest in motherhood', 'social' and 'lifestyle' which include factors such as 'lack of interest in being a mother' and 'wanting to travel before having children' may not be relevant for policy intervention or difficult for policy to target or change effectively. It may be as the Productivity Commission concluded that 'government policy cannot close the gap between ideal and expected outcomes in all aspects of people's lives' (Lattimore and Pobke 2008: 89). Although,

as suggested by McDonald (2002c) there may be some scope for policies to target these more psychological determinants by aiming to develop positive social attitudes toward children and parenting.

6.2.2.1 Health concerns

It is important that policies which address the fertility rate include a focus on health factors as one of the most striking and original findings of this study was that adverse health conditions were a major contributor to women currently not having children. These included treatment for a medical condition causing fertility problems, concerns about how a pregnancy could affect the course of a health condition, and the likelihood that a health condition could be inherited by a baby.

Appropriate health initiatives could include the provision of information and support from health care providers regarding the effect of medications and health conditions and their treatment on fertility, pregnancy, childbearing and childrearing, and counselling and information regarding fertility options prior to treatment for health conditions (for example, freezing eggs); and information regarding the availability of genetic screening for those concerned about the possibility of heritable health conditions.

Women are more likely to have more children if they commence childbearing at an earlier age, given the biological constraints to women's fertility (Wood et al. 1992, Gosden and Rutherford 1995, Lansac 1995). Delays in childbearing are also associated with poorer reproductive outcomes (Gosden and Rutherford 1995, Lansac 1995, Jolly et al. 2000, Tough et al. 2002, Bewley et al. 2005). The participants in this study were aware of the dangers, such as the increased risk of not conceiving, and the risks to mother and baby of childbearing at later ages, of delayed childbearing. Although the sample included women with a diverse range of educational backgrounds, participants were more likely to hold a post secondary school qualification than women in the general population. The participants were also at an age (30-35 years) when many Australian women are having or thinking about having children. As a result, it is likely that the participants in this study may have been more aware of the risks of childbearing at later ages than women in the general population.

Nevertheless, it is important that policy supports women to have children at optimal ages for childbearing, and ensures that women are educated, including sex/health education in schools, and universal reproductive health promotion strategies, about their fertility and the effects of later maternal age on fertility, and pregnancy and childbearing outcomes. The Royal College of Obstetricians and Gynaecologists (2009) in the UK recently released a statement encouraging women to consider having families during the period of optimum fertility.

6.2.2.2 Partner fertility attitudes and behaviours

Women are more likely to have children if they are partnered. Concerns about the stability of the relationship and the willingness of their partner to help raise children were salient factors in women's childbearing outcomes and identified as likely to be important in future childbearing decisions. Therefore, policy interventions including relationship education in schools, premarital education, and the provision of relationship counselling which aims to enhance couple relationships and minimise separation may be beneficial in assisting women to have the number of children they desire.

6.2.2.3 Managing paid employment and family responsibilities

Supportive work and family practices such as having a 'family friendly' employer or having access to good quality and affordable childcare were identified as important reasons for participants having both their first child and more children after their first child. There is strong evidence regarding the effectiveness of supporting women to combine paid employment and childrearing in maintaining fertility rates (McDonald 2002b). Family policies in Europe, including paid maternity leave, which aim to help women combine child rearing with paid employment have had a positive effect on fertility, the magnitude of which varies by country and parity (Gauthier and Hatzius 1997, Lutz et al. 2003). Furthermore, empirical studies suggest that policies which assist women to balance their paid employment and family responsibilities including the availability of maternity leave (Hantrais 1997, Averett and Whittington 2001, Risse 2006), child care (Blau and Robins 1989, Mason and Kuhlthau 1992, Kravdal

1996, Del Boca 2002) and secure employment (Ranson 1998, Armenti 2004, Weston et al. 2004) have a positive effect on fertility.

McDonald (2002b, 2002c) argues that effective policies to assist women manage their paid employment and childbearing include leave arrangements that are sufficient to meet income needs while a couple has children; a guaranteed return to paid employment after having a child with an option of reduced hours; flexible working hours; short term leave for family related reasons (such as caring for a sick child); and provision of subsidised high quality child care. Such policies minimise the career disruptions and preserve opportunities for promotion for women taking time out of the paid workforce to have and care for children, and support them to combine paid employment and family responsibilities. A recent research paper by the Australian Institute of Family Studies concluded that ‘policies that lower the direct and indirect costs to families of raising children, and allow women to combine paid employment with childrearing are likely to have a positive impact on the fertility rate (that is, stem the decline or ‘boost’ the rate)’ (Gray et al. 2008: ix).

6.2.2.4 Housing aspirations and affordability

Housing concerns such as wanting to buy a house, reduce a mortgage or renovate a house were important in participants’ childbearing outcomes and were negatively associated with fertility. It appears that many participants delayed childbearing until they were able to address their housing concerns, or revised their expectations about having children due to their housing concerns. Accordingly, it may be prudent for policy to address housing affordability and provide assistance with housing costs.

It should be noted that from May 2004 (a year prior to data being collected for this study) a ‘first home owners grant’ of AUD5,000 was paid by the Victorian State Government to eligible Victorians who purchased or built a home. The aim of the grant was to make buying a home more affordable for all Victorians (Office of the Treasurer (Victorian Government) 2005).

6.3 FUTURE RESEARCH

This study provides detailed information about women's childbearing behaviour, in particular the factors which are associated with women's childbearing outcomes. Despite the large, broadly representative sample of this study and the fact that most Australian women are having children in their early to mid thirties, it would be useful for the relationship between the factors investigated and women's childbearing behaviour to be further tested with varied samples of Australian women, including women of different ages, cultural and linguistic backgrounds, levels of literacy, and education and employment status.

There are other factors which are likely to be associated with women's childbearing desires, outcomes and expectations which were not investigated in this study but which could be explored by future research. Such factors may contribute to the 45-50 percent of unexplained variance in the principal components analyses which identified the groups of factors important in participants' childbearing outcomes.

For example, several participants commented that the level of support they have from others was likely to be influential in their future childbearing decisions and in particular, a lack of support was likely to deter them from having (more) children in the future. Therefore, it would be useful for future studies to investigate the type and level of social support that women have and its contribution to their childbearing desires, outcomes and expectations. Read et al. (2007) also identified family and social support as an important factor in women's childbearing outcomes with mothers who did not have a support network nearby less likely to achieve their childbearing preferences.

Further, this study did not specifically investigate the reasons for women's childbearing desires. Much popular attention (for example, books (Davitz 1984, Hewlett 2002) and media articles (Marsh 2010)) has been given to 'baby hunger', an unexplained powerful longing or desire to have a child, as a reason for women wanting to have children. Although 'baby hunger' as such was not identified in the scholarly literature examined in this thesis as a motivator for childbearing or commented on by the participants in this study, it and other reasons for women's

childbearing desires would be a valuable area for future research to explore. It would also be interesting to investigate whether the ‘motivators’ for wanting children reflect or match the reasons people give for actually having children.

Also, the aim of this study was to examine women’s childbearing behaviour and therefore, it was outside its scope to collect data regarding the salient factors in men’s childbearing desires, outcomes and expectations. Future studies of childbearing behaviour should examine men’s experiences and investigate the correspondence between these factors for women and men.

Further research on this issue will assist, as this study has done, in enhancing understanding of the factors which are associated with women’s childbearing outcomes, and provide a strong evidence base for policy development.

6.4 CONCLUSION

Women’s childbearing outcomes are popularly understood to be determined by financial or career considerations. Through its method, findings and development of an alternate theoretical model this study makes an important original contribution to knowledge about women’s childbearing behaviour, challenging this popular assumption and providing evidence that it is an oversimplification.

The data demonstrate that women’s childbearing outcomes are associated with diverse biological, psychological and social factors not just the ‘costs’ to women of having children which have predominated previous understandings. The innovative conceptual framework of women’s childbearing behaviour developed as a result of this study’s findings illustrates the importance of women’s circumstances including those which are both conducive and barriers to childbearing, and the complex and multifactorially determined nature of women’s childbearing. The findings and conceptual framework have implications for policy, and indicate that multiple approaches are required which are sensitive to and address the barriers women face in family formation.

7 REFERENCES

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8 APPENDICES

8.1 APPENDIX 1: PARTICIPANT QUESTIONNAIRE



THE UNIVERSITY OF
MELBOURNE



To Have or Not to Have?

A Study of Australian Women's Childbearing Decisions

Questionnaire

key centre for
**WOMEN'S
HEALTH**
in society

Please return your completed questionnaire in the enclosed envelope to:

Sara Holton
Key Centre for Women's Health in Society
The University of Melbourne
Victoria 3010 Australia



To Have or Not to Have?

A Study of Australian Women's Childbearing Decisions

Thank you very much for agreeing to participate in this study. Your time and cooperation in completing this questionnaire are greatly appreciated.

The aim of this study is to learn more about the factors which are important in Australian women's decisions about having or not having children. Your cooperation in completing this questionnaire will assist with this.

Your answers to this questionnaire will be combined with those of other women and reported as group data only, your individual answers will not be identifiable so please do not write your name anywhere on the questionnaire.

How to Answer the Questionnaire

There are no right or wrong answers to any of the questions. We are simply interested in your thoughts and opinions. Please answer every question. If you are unsure about how to answer a question, mark the response which corresponds to the closest to how you feel. The questionnaire will take approximately 30 minutes to complete.

To answer the questions, please place a tick inside the appropriate box or write in the space provided.

Examples

Example 1: **Do you have school aged children?**
(Tick one box only)

- Yes You would tick this box if you have school aged children
- No

Example 2: **Which language do you prefer to speak at home?**
(Please specify on the line)

English You would write 'English' on the line if this is the language you prefer to speak at home

Example 3: **How much do you agree with the following?**
(Tick one box only)

- | | Strongly Agree | Agree | Neither Agree or Disagree | Disagree | Strongly Disagree |
|---|-------------------------------------|--------------------------|---------------------------|--------------------------|--------------------------|
| • In general, I am satisfied with my life | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
- You would tick the 'strongly agree' box if you are very satisfied with your life

SECTION A: SOME INFORMATION ABOUT YOU

To start with we would like to ask some questions about you

1. What was your age at your last birthday?

(Write your age on the line)

_____ Years

2. What is the HIGHEST level of education you have completed so far?

(Tick one box only)

- Primary School 1
- Partially completed secondary school
(eg less than Year 12) 2
- Completed secondary school (eg Year 12) 3
- Trade/apprenticeship (eg hairdresser, chef) 4
- Certificate/diploma (eg child care, technician) 5
- University degree 6
- Higher university degree (eg Masters, PhD) 7

3. What is your present marital status?

(Tick one box only)

- Never Married 1
- Married 2
- De facto (opposite sex) 3
- De facto (same sex) 4
- Separated 5
- Divorced 6
- Widowed 7

4. What is the postcode where you live?

(Write your postcode on the line)

5. Which of the following best describes the household you live in?

(Tick one box only)

- I live alone 1
- I live with my partner only 2
- I live with my partner and child(ren) 3
- I live with my child(ren) 4
- I live with my parent(s) (with or without brothers/sisters) 5
- I live with other adults (no children) 6
- I live with other adults (with children) 7
- Other (Please specify on the line) 8

6. At the place where you now live, are you?

(Tick one box only)

- An owner or a purchaser 1
- A renter 2
- Living rent free 3
- A boarder or a lodger (eg you live at someone else's house,
pay rent and may receive meals) 4
- I don't want to answer 5
- Other (Please specify on the line) 6

7a. What is your main occupation NOW?

(Write your occupation on the line below)

7b. How many hours do you normally spend in your paid work each week?

(Write number on the line below or tick the I don't have a paid job box)

_____ Hours

I don't have a paid job **Go to Question 7d.**

7c. If you have a paid job, are you?

(Tick one box only)

- Self employed 1
- Employed on a fixed term contract 2
- Employed on a casual basis 3
- Employed on a permanent or ongoing basis 4
- Other (Please specify on the line) 5

7d. If you do not have a paid job, are you mainly?

(Tick one box only)

- A full time student 1
- A full time mother 2
- A full time volunteer 3
- A full time carer (eg for an elderly or ill relative) 4
- Unemployed 5
- Unable to work due to sickness or injury 6
- Other (Please specify on the line) 7

8a. How many brothers and sisters did you live with when you were growing up? (include half, step, foster or adopted brothers and sisters)

(Write number on the line below)

8b. Were you the oldest of your brothers and sisters when you were growing up?

(Tick one box only)

- Yes – I was the oldest 1
- No – I was between the eldest and the youngest 2
- No – I was the youngest 3
- I am an only child 4

9. Are you of Aboriginal or Torres Strait Islander origin?

(Tick all that apply)

- No 1
- Yes, Aboriginal 2
- Yes, Torres Strait Islander 3

10a. Which country were you born in?

(Please write country on the line)

10b. If you were not born in Australia, how many years have you lived in Australia?

(Write number on the line below or tick the not applicable box)

_____ years

Not applicable (I was born in Australia)

10c. Which country was your mother born in?

(Please write country on the line or tick the I don't know box)

I don't know

10d. Which country was your father born in?

(Please write country on the line or tick the I don't know box)

I don't know

11a. What religious affiliation, if any, do you have?

(Tick one box only)

- Buddhist..... 1
- Christian 2
- Hindu 3
- Jewish 4
- Muslim 5
- No Religious affiliation..... 6
- Other Religion *(Please specify on the line)* _____ 7
- I don't want to answer 8

11b. How important is religion to you in your daily life?

(Tick one box only)

- Very Important 1
- Important 2
- Neither important nor unimportant 3
- Unimportant..... 4
- Not at all important..... 5

12. Which of these most closely describes your sexual orientation?

(Tick one box only)

- I am heterosexual 1
- I am homosexual (lesbian) 2
- I am bisexual 3
- I don't know 4
- I don't want to answer 5

SECTION B: WOMEN AND MOTHERHOOD

In this section, we are interested in your thoughts about the roles, responsibilities and expectations of women

13. These are some statements about WOMEN IN AUSTRALIA (in general) TODAY. How much do YOU agree or disagree with each of these statements?

(Tick one box on each line)

	Strongly Agree (1)	Agree (2)	Neither Agree or Disagree (3)	Disagree (4)	Strongly Disagree (5)
a. Women in Australia are viewed more favourably if they have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Women in Australia are able to have both a career and children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Women in Australia are under pressure to have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Motherhood is valued in Australia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Motherhood is just one possible option for women in Australia today	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. These are some statements about ROLES, RESPONSIBILITIES AND EXPECTATIONS OF WOMEN. How much do YOU agree or disagree with each of these statements?

(Tick one box on each line)

	Strongly Agree (1)	Agree (2)	Neither Agree or Disagree (3)	Disagree (4)	Strongly Disagree (5)
I think that ...					
a. Whatever career a woman may have, her most important role in life is still that of being a mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. It is OK for a woman to have a career and her partner to care for their children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. A man should earn more than his partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. If both partners in a couple have paid jobs, they should share the housework and care of children equally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Higher education is more important for men than women	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. A mother who has a paid job can have as good a relationship with her children as a mother who does not work outside of the home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. A woman should be married before she has children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. It is OK for women with young children to work outside the home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. These are some statements about WOMEN AND MOTHERHOOD. How much do YOU agree or disagree with each of these statements?

(Tick one box on each line)

	Strongly Agree (1)	Agree (2)	Neither Agree or Disagree (3)	Disagree (4)	Strongly Disagree (5)
I think that ...					
a. A woman is not a 'real woman' until she becomes a mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. A woman can live a full and happy life without ever having children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. A woman who doesn't want children is unnatural	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Having children is a small part of being a woman	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. It is selfish not to want children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Women should be able to decide if and when they have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. It is OK for a woman to choose not to have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION C: TO HAVE OR NOT TO HAVE CHILDREN? YOUR EXPERIENCES AND DECISIONS

Women may have very different reasons for having or not having children. This section examines your experiences, and the factors which have been important to you in your decisions.

16. Women's decisions about having children vary. For example, some women make very firm decisions early in their life about having or not having children. Which of the following best describes you?

(Tick one box only)

I have always been certain that I want children 1
(eg I made a firm decision at an early stage and I have never changed my mind)

I have always been certain that I do not want children 2
(eg I made a firm decision at an early stage and I have never changed my mind)

I am certain now that I want children 3
(eg I had some doubts in the past but now I am certain that I want children)

I am certain now that I do not want children 4
(eg I had some doubts in the past but now I am certain that I do not want children)

I am unsure about having children 5
(eg I don't know whether or not I want children)

I haven't made a decision yet about having or not having children 6
(eg I've never really thought about it or made a firm decision)

I didn't make a decision, I just had children 7
(eg I didn't really think about having children, I just had them)

I feel that the decision to have children was out of my hands 8
(eg My partner always wanted to have children)

I feel that the decision not to have children was out of my hands 9
(eg I've had problems conceiving a child, or my circumstances, for example not having a partner, mean that I haven't had a choice in not having children)

Other (please specify on the line) 10

17. How many times have you?

(Tick one box on each line)

	None (0)	One (1)	Two (2)	Three (3)	Four (4)	Five or more (5)
a. Adopted a child(ren)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Fostered a child(ren)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Had step child(ren)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Had a live birth (more than 36 weeks)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Had a live premature birth (36 weeks or less)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Had a stillbirth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Had a miscarriage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Had a termination (abortion) because of foetal abnormalities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Had a termination (abortion) for other reasons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Had a caesarean birth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. Are you currently pregnant?

(Tick one box only)

Yes 1

No 2

I don't know..... 3

19a. Are you currently using contraception?

(Tick one box only)

Yes 1

No 2

I don't want to answer 3

If No, go to Question 19b

19b. If NO, which of the following statements best describes why you are not using contraception now?

(Tick one box only)

I am pregnant..... 1

I have recently had a baby 2

I am actively trying to become pregnant 3

I can't have children (eg tubal ligation, hysterectomy, infertility)..... 4

My partner can't have children (eg vasectomy, infertility) 5

I currently have no male sexual partner 6

I'm not really trying to become pregnant but wouldn't mind if I did..... 7

Other *(Please specify on the line)* 8

20. If you have ever given birth to a child, please write the date of each birth on the corresponding line. (If you had twins or a multiple birth, please write the date twice on the same line.)

(Write the dates on the lines below or tick the not applicable box)

1st _____ 2nd _____ 3rd _____

4th _____ 5th _____ 6th _____

Not Applicable (I have never given birth to a child)

21a. How old were you when you gave birth to your first child?

(Write your age on the line below or tick the not applicable box)

_____ years

Not Applicable (I have never given birth to a child)

If not applicable, go to Question 21b

21b. If you don't have children, how old would you like to be when you have your first child?

(Write your age on the line below or tick the not applicable box)

_____ years

Not Applicable (I don't want to have children)

If not applicable, go to Question 21c.

21c. If you have decided not to have children, how old were you when you made that decision?

(Write your age in the box or tick the I don't know / I can't remember box)

_____ years

I don't know / I can't remember

22. Have you and your partner (current or previous) ever tried unsuccessfully to get pregnant for 12 months or more?

(Tick one box only)

- Yes - but have not sought help or treatment 1
- Yes - and have sought treatment for diagnosed female infertility 2
- Yes - and have sought treatment for diagnosed male infertility 3
- Yes - and have sought help for unexplained infertility (male or female) 4
- No - never tried to get pregnant 5
- No - had no problem with fertility 6

Women's decisions to have or not have children may be influenced by a variety of factors. The following questions list some reasons different women have given as important in their decisions. Please rate the importance of each factor to your decisions.

If you do not have children please answer only Question 23 (then go to Question 26)

If you have one child, or are pregnant with your first child, please answer only Question 24 (then go to Question 26)

If you have more than one child, or are pregnant with your second or later child, please answer both Question 24 & Question 25 (then go to Question 26)

23. If you do not have children, please indicate if the following items are important reasons for this.

(Tick one box on each line)

If you have a child or children, go to Question 24.

	Very Important	Important	Neither Important or Unimportant	Unimportant	Not at all Important	Not Applicable
	(1)	(2)	(3)	(4)	(5)	(6)
a. I don't have a partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
b. My partner doesn't want to have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
c. Having children will upset my relationship with my partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
d. I don't think my partner will help raise children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
e. I have recently broken up with my partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
f. I have just started a new relationship	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
g. My relationship with my partner is not very stable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
h. I don't like children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
i. The idea of having and raising children isn't attractive to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
j. I don't have any interest in being a mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
k. I don't think I would make a good mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
l. My religion doesn't say that women have to have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
m. None of my friends have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
n. I think the world is currently not a good place to raise children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
o. I think the world already has too many people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
p. I think it is bad for the environment if there are too many people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
q. I would have to give up my freedom if I had children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
r. Having children would affect my current lifestyle negatively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
s. I would like to travel before I have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

	Very Important	Important	Neither Important or Unimportant	Unimportant	Not at all Important	Not Applicable
	(1)	(2)	(3)	(4)	(5)	(6)
t. I am a full time carer for a family member (eg elderly or ill relative)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
u. I am concerned about the cost of raising children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
v. I want to be financially secure before I have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
w. My income is low	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
x. I want to establish my career before I have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
y. I want to achieve my career goals before I have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
z. I think it will be hard to manage my paid work and care for children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
aa. My employer isn't 'family friendly' (eg I don't get paid maternity leave)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
bb. I would like to get a job before I have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
cc. I don't have a secure job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
dd. I am worried about finding good quality and affordable child care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
ee. I want to finish my education before I have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
ff. I have a large debt from my education (eg HECS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
gg. I want to buy a house before I have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
hh. I want to renovate my house before I have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
ii. I want to move house before I have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
jj. I want to reduce my mortgage before I have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
kk. I think I am too young to have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
ll. I think I am too old to have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
mm. I think I still have plenty of time to have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
nn. I have a health condition which affects my fertility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
oo. Treatment I had for a health condition caused me fertility problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
pp. I take medication which shouldn't be used during pregnancy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
qq. I have a health condition which may cause problems in pregnancy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
rr. Pregnancy could affect my health condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
ss. I have a health condition which could affect my baby's wellbeing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
tt. I have a health condition which could be transmitted to my baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
uu. I have a health condition which could be inherited by my baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
vv. My health condition could make it difficult for me to care for a baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
ww. I have a health condition which could shorten the length of my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
xx. I can't have children (eg due to infertility, hysterectomy, tubal ligation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
yy. Other (<i>Please specify on the line below</i>)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

23a. Of all the issues you have identified above (in question 23) as important reasons, which are the three most important for you?

(Please write on the lines below)

1. _____

2. _____

3. _____

Now go to Question 26.

24. If you have a child or children (or are pregnant), please indicate if the following items were important reasons for having your first child.

(Tick one box on each line)

	Very Important	Important	Neither Important or Unimportant	Unimportant	Not at all Important	Not Applicable
	(1)	(2)	(3)	(4)	(5)	(6)
a. My partner wanted children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
b. I thought children would strengthen my relationship with my partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
c. I knew my partner would help raise children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
d. I like children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
e. I always wanted children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
f. I thought children would look after me in my old age	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
g. My family line would be carried on if I had children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
h. Having children would create a family of my own	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
i. Having children is the most important thing I could do as a woman	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
j. Having children would make me feel grown up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
k. Having children would make me feel fulfilled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
l. I wanted to be a mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
m. I thought I would make a good mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
n. Having children is in line with my religious beliefs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
o. All my friends were having children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
p. I think Australia needs more people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
q. I thought my life would be enriched by having children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
r. I thought children would be a source of fun, pleasure & pride	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
s. I had done the travelling I wanted to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
t. I was financially secure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
u. My income was sufficient for me to have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
v. My career was established	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
w. I had achieved my career goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
x. I was able to manage my paid work and care for children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
y. My employer was 'family friendly' (eg I got paid maternity leave)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
z. My job was secure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

	Very Important	Important	Neither Important or Unimportant	Unimportant	Not at all Important	Not Applicable
	(1)	(2)	(3)	(4)	(5)	(6)
aa. I had access to good quality and affordable child care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
bb. I had finished my education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
cc. I had paid or reduced my debts from my education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
dd. I had bought a house	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
ee. I had renovated my house	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
ff. I had paid or reduced my house mortgage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
gg. I thought I was the right age to have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
hh. I thought I shouldn't wait any longer otherwise I would be too old to have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
ii. I was in good health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
jj. The prognosis of my health condition was uncertain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
kk. My pregnancy was unplanned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
ll. Other (Please specify on the line below)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

24a. Of all the issues you have identified above (in question 24) as important reasons for having your first child, which are the three most important for you?

(Please write on the lines below)

1. _____
2. _____
3. _____

If you have more than one child, go to Question 25.

If you only have one child, go to Question 26.

25. If you have children (or are pregnant with your second or later child), please indicate if the following items were important reasons for having more children after your first child.

(Tick one box on each line)

	Very Important	Important	Neither Important or Unimportant	Unimportant	Not at all Important	Not Applicable
	(1)	(2)	(3)	(4)	(5)	(6)
a. My partner wanted more children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
b. I thought more children would strengthen my relationship with my partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
c. I knew my partner would help raise more children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
d. I like children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
e. I always wanted more than one child	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
f. I wanted more children than I already had	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
g. I wanted a child of the opposite sex to those I already had	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
h. There would be the right age gap between my children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

	Very Important	Important	Neither Important or Unimportant	Unimportant	Not at all Important	Not Applicable
	(1)	(2)	(3)	(4)	(5)	(6)
i. I didn't want my first child to be an only child	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
j. I thought children would look after me in my old age	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
k. My family line would be carried on if I had more children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
l. I would create a family of my own if I had more children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
m. Having children is the most important thing I could do as a woman	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
n. Having more children would make me feel grown up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
o. Having more children would make me feel fulfilled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
p. I wanted to be a mother to more children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
q. I think I am a good mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
r. Having many children is in line with my religious beliefs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
s. All my friends were having more children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
t. I think Australia needs more people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
u. I thought my life would be enriched by more children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
v. I thought more children would be a source of fun, pleasure & pride	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
w. I had done the travelling I wanted to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
x. I was financially secure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
y. My income was sufficient for me to have more children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
z. My career was established	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
aa. I had achieved my career goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
bb. I was able to manage my paid work and care for children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
cc. My employer was 'family friendly' (eg I got paid maternity leave)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
dd. I had a secure job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
ee. I had access to good quality and affordable child care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
ff. I had finished my education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
gg. I had paid or reduced my debts from my education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
hh. I had bought a house	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
ii. I had renovated my house	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
jj. I had paid or reduced my house mortgage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
kk. I thought I was the right age to have more children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
ll. I was in good health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
mm. The prognosis of my health condition was uncertain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
nn. My pregnancy(s) was unplanned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
oo. Other <i>(Please specify on the line below)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

25a. Of all the issues you have identified above (in question 25) as important reasons to have more children, which are the three most important for you?

(Please write on the lines below)

1. _____

2. _____

3. _____

26. Some women say they feel pressure from others to have children. How much pressure to have children do you or did you feel from the following people?

(Tick one box on each line)

	A lot (1)	A little (2)	None (3)	Don't know (4)	Not applicable (5)
a. Your partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
b. Your mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
c. Your father	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
d. Your partner's mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
e. Your partner's father	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
f. Your siblings (eg sisters, brothers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
g. Other family members (eg other in laws, aunts/uncles, grandparents, cousins)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
h. Your friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
i. People at your work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
j. Your neighbours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
k. Broader social pressure (eg the media, government)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
l. Your religion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
m. Other <i>(please specify on the line)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

26a. Some women say they feel pressure from their partner not to have children. Have you felt any pressure from your partner not to have children?

(Tick one box only)

A lot (1)	A little (2)	None (3)	Don't know (4)	Not applicable (5)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

27. How satisfied are you with the number of children you currently have or your decision not to have children?

(Tick one box only)

Completely dissatisfied				Mixed			Completely satisfied		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

28. If you could have exactly the number of children you want, what would that number be?

(Write number on the line below)

The following questions are about decisions you might make in the future about having or not having children.

29. Would you like to have a child or more children in the future? Indicate your desire to have (more) children on the following scale:
(Tick one box only)

Definitely want a(nother) child				Not sure		Definitely don't want a(nother) child			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

30. How likely are you to have a child or more children in the future? Indicate the likelihood of you having (more) children on the following scale:
(Tick one box only)

Very likely			Not sure				Very unlikely		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

31. What factors do you think might influence your future decisions about having or not having (more) children? Please indicate how important the following reasons are likely to be.
(Tick one box on each line)

	Very Important	Important	Neither Important or Unimportant	Unimportant	Not at all Important	Not Applicable
	(1)	(2)	(3)	(4)	(5)	(6)
a. Not having a partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
b. My partner's desires about having or not having children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
c. The effect of children on my relationship with my partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
d. My partner's willingness to help raise children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
e. The stability of my relationship with my partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
f. My like or dislike of children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
g. My interest or lack of interest in being a mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
h. My previous experience of being a mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
i. My religious beliefs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
j. If my friends have children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
k. Concerns I have about population issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
l. Concerns I have about the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
m. Wanting to maintain my freedom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
n. Wanting to maintain my current lifestyle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
o. Wanting to travel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
p. The care responsibilities I already have (eg for children & other relatives)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
q. Financial concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
r. Career or work issues (eg wanting to achieve my career goals)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
s. Being able to manage my paid work with caring for children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
t. Child care issues (eg being able to find good quality & affordable child care)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

	Very Important (1)	Important (2)	Neither Important or Unimportant (3)	Unimportant (4)	Not at all Important (5)	Not Applicable (6)
u. Education issues (eg finish studying)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
v. Housing concerns (eg buy, renovate or move house; pay off mortgage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
w. My age	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
x. My health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
y. Being unable to have children (eg due to infertility or having had a hysterectomy or if your partner has had a vasectomy etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
z. Other (Please specify on the line below)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

31a. Of all the reasons you have identified above (in question 31) as likely to be important to whether or not you have (more) children, which do you think are likely to be the three most important for you?
(Please write on the lines below)

1. _____
2. _____
3. _____

SECTION D: YOUR HEALTH AND WELLBEING

Some women say that their childbearing decisions have been influenced by their health. This section examines your past and current health and wellbeing.

32. In general, would you say your health is:
(Tick one box only)

- | | | | | |
|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Excellent | Very good | Good | Fair | Poor |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |

33. The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?
(Tick one box on each line)

	Yes, limited a lot (1)	Yes, limited a little (2)	No, not limited at all (3)
a. <u>Moderate</u> activities, such as moving a table, pushing a vacuum cleaner, bowling or playing golf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Climbing <u>several</u> flights of stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

34. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

(Tick one box on each line)

	All of the time (1)	Most of the time (2)	Some of the time (3)	A little of the time (4)	None of the time (5)
a. <u>Accomplished less</u> than you would like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Were limited in the <u>kind</u> of work or other activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

35. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

(Tick one box on each line)

	All of the time (1)	Most of the time (2)	Some of the time (3)	A little of the time (4)	None of the time (5)
a. <u>Accomplished less</u> than you would like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Did work or other activities <u>less carefully than usual</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

36. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

(Tick one box only)

Not all ₁ A little bit ₂ Moderately ₃ Quite a bit ₄ Extremely ₅

37. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks:

(Tick one box on each line)

	All of the time (1)	Most of the time (2)	Some of the time (3)	A little of the time (4)	None of the time (5)
a. Have you felt calm and peaceful?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Did you have a lot of energy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Have you felt downhearted and depressed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

38. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives etc)?

(Tick one box only)

All of the time ₁ Most of the time ₂ Some of the time ₃ A little of the time ₄ None of the time ₅

39. In YOUR LIFETIME, have you been diagnosed with or treated for:

(Tick all that apply)

- Gestational diabetes (during pregnancy) 1
- Insulin dependent (Type I) diabetes 2
- Non-insulin dependent (Type II) diabetes 3
- Heart disease 4
- Hypertension (high blood pressure) during pregnancy 5
- Hypertension (high blood pressure) other than during pregnancy 6
- Low iron (iron deficiency or anaemia) 7
- Asthma 8
- Rheumatoid arthritis 9
- Depression 10
- Anxiety disorder 11
- Endometriosis 12
- Urinary tract infection 13
- A sexually transmitted infection (eg chlamydia, genital herpes) 14
- Hepatitis B or C 15
- An eating disorder 16
- Substance abuse 17
- Alcohol dependence 18
- Cancer *(Please specify type on the line)* 19
- Other major illness *(Please specify type on the line)* 20
- None of these conditions 21

40. How many times in the last 12 months, for YOUR OWN HEALTH (excluding pregnancy & childbirth), have you consulted a:

(Tick one box on each line)

	None (0)	1-2 (1)	3-4 (2)	5-6 (3)	7-8 (4)	9 or more (5)
a. Family doctor or general practitioner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Hospital doctor (outpatient or casualty)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Specialist doctor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Allied health professional (eg optician, dentist, physiotherapist, counsellor etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Alternative health practitioner (eg naturopath, acupuncturist, herbalist etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Family planning service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Sexual health service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

41. How many times in the last 12 months have you been admitted to hospital for YOUR OWN HEALTH (excluding pregnancy & childbirth)?

(Tick one box only)

- None
(0)
- 1-2
(1)
- 3-4
(2)
- 5-6
(3)
- 7-8
(4)
- 9 or more
(5)

42. In terms of your satisfaction with life, how much do you agree with the following?

(Tick one box on each line)

	Strongly Agree (1)	Agree (2)	Neither Agree or Disagree (3)	Disagree (4)	Strongly Disagree (5)
a. In most ways my life is close to my ideal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. The conditions of my life are excellent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. I am satisfied with my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. So far I have gotten the important things I want in life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. If I could live my life over, I would change almost nothing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

43. How satisfied are you with:

(Tick one box on each line)

	Completely dissatisfied				Mixed				Completely satisfied		Not applicable (11)	
	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		(10)
a. Your standard of living	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Your health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. What you have achieved in life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Your personal relationships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. How safe you feel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Feeling part of your community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Your future security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Your relationship with your partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
i. Being a mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
j. Your relationship with your children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>



Thank you for completing this questionnaire

Please return your completed questionnaire in the reply paid envelope provided
as soon as possible.

If the issues raised in the questionnaire caused you any distress or you would like to discuss
them further please contact
Dr Jane Fisher on 03 8344 7350,
or you may wish to contact Relationships Australia
on 1800 817 569 or Lifeline on 131114

If you have any questions about the research project you can contact us at:

Telephone: 03 8344 4333

Email: s.holton@pgrad.unimelb.edu.au

Address: Key Centre for Women's Health in Society, The University of Melbourne, Victoria
3010 Australia

8.2 APPENDIX 2: LETTER OF INVITATION TO PARTICIPATE IN THE STUDY

May 5, 2005

2142 Highett Rd
MELBOURNE VIC 3102



THE UNIVERSITY OF
MELBOURNE

Dear Serena

To Have or Not To Have? A Study of Australian Women's Childbearing Decisions

We are writing to ask you to participate in a study about the factors which are important in Australian women's decisions to have or not have children. We are inviting you to participate in this study because we understand that you are an Australian woman of childbearing age. Your name was drawn through a random sampling process in which every Victorian woman aged between 30 and 34 years on the Australian Electoral Roll had an equal chance of being drawn. In total 1300 women are being invited to take part in the study which involves completing the attached questionnaire.

Your participation in the study is voluntary. You are asked not to write your name on the questionnaire and therefore, all information collected will be anonymous. The information collected will also be kept confidential.

We are particularly interested in finding out about the factors which may have been important in your decisions about having or not having children, your thoughts on the roles of women in Australia, and your past and present health and wellbeing. We have attached an information sheet which gives you more details about our study and how you can take part.

Your participation will make a valuable contribution to this research. We hope that as many women as possible will complete the questionnaire so that the findings will represent the views and experiences of a wide range of women. The results of the study will increase our understanding of the factors which are important in Australian women's childbearing decisions. The results will also help plan and develop Australian social, organisational, economic and health policy and services that meet the needs and concerns of women.

We realise that you are likely to be very busy but hope that you can find the time to fill in our questionnaire and return it in the envelope provided. No stamp is needed. If there is anything else you would like to tell us about your decisions or thoughts we would be very interested to hear it. There is a blank page at the end of the questionnaire for any extra comments you may have.

Thank you for your time and consideration of this study. We hope you will agree to participate.

Yours sincerely

Ms Sara Holton

Dr Jane Fisher

Dr Heather Rowe

Key Centre for Women's Health in Society

World Health Organization Collaborating Centre for Women's Health

Department of Public Health

School of Population Health

Faculty of Medicine, Dentistry and Health Sciences

The University of Melbourne

Victoria 3010 Australia

T: +61 3 8344 4333 F: +61 3 9347 9824

W: <http://www.kcwhs.unimelb.edu.au>



key centre for
**WOMEN'S
HEALTH**
in society

8.3 APPENDIX 3: PLAIN LANGUAGE STATEMENT

PLAIN LANGUAGE STATEMENT/ INFORMATION SHEET



To Have or Not To Have? A Study of Australian Women's Childbearing Decisions

Introduction

There have been major changes in childbearing patterns in Australia. On average Australian women are having fewer children than ever before, and having their children at later ages. Also, more Australian women will never have children. As a result, Australia's birth rate has fallen. This decline has recently become an issue of concern in Australian society and has been widely talked about. However, little is known about the factors which are important in Australian women's decisions to have or not have children.

As an Australian woman of childbearing age, we would like to invite you to participate in this study. Your name and address have been drawn at random from the Australian Electoral Roll by the Australian Electoral Commission, and in accordance with the *Guidelines Under Section 95 of the Privacy Act 1988*. Under provisions of the *Commonwealth Electoral Act 1918* the Australian Electoral Commission can provide elector name, address, gender and age related information for use in research.

This study is being conducted by Dr Jane Fisher (supervisor), Dr Heather Rowe (supervisor) and Ms Sara Holton (PhD candidate) of the Key Centre for Women's Health in Society at the University of Melbourne. This study will form part of Ms Holton's Doctor of Philosophy (PhD) thesis, and has been approved by the University of Melbourne's Human Research Ethics Committee.

What will I be asked to do?

The aim of this study is to investigate the factors which are important in Australian women's decisions to have or not have children. Participation involves completion of the attached questionnaire. The questionnaire asks you to respond to various statements and questions about the factors which may have been important in your decisions, your thoughts on the roles of women in Australia, and your past and present health and wellbeing. We estimate that the questionnaire should take no longer than 30 minutes to complete.

Although this study will not benefit you directly, the information you provide will increase our understanding of the factors which are important in Australian women's decisions to have or not have children, and add to knowledge about the reasons for Australia's falling birth rate. It is expected that the results of this study will help plan and develop future Australian social, organisational, economic and health policy and services, and ensure these are based on the needs and views of women themselves.

How will my confidentiality be protected?

Your anonymity and the confidentiality of your responses will be protected to the fullest possible extent, within the limits of the law. Your name and contact details have been provided to the

researchers by the Australian Electoral Commission on a CD-ROM. This CD-ROM will be destroyed after a reminder letter has been sent to all participants in 3 weeks time. You do not have to identify yourself on the questionnaire, for example, you are asked not to write your name or address anywhere on the questionnaire. Therefore, it will not be possible to match you to the completed questionnaire you return. Also, the results of this study will be reported as group data only so your individual information will not be identifiable. All computer files related to this study will be accessed only by the researchers and will be password protected. The data from this study will be kept securely in the Key Centre for Women's Health in Society for five years from the date of its publication, before being destroyed.

How will I receive feedback?

Once the results of this study are analysed, a brief summary of the findings will be available to you. If you would like to receive a summary of the findings please complete the attached summary of results form and return it in the smaller (white) pre paid envelope provided. Please note that because this form and your questionnaire are returned in separate envelopes, your name and contact details cannot be associated with your questionnaire in any way. The results of this study will be presented at academic conferences and published in peer reviewed journals.

Is my participation in this study voluntary?

Your participation in this study is completely voluntary.

Where can I get further information?

Should you require any further information, or have any concerns, regarding this study please do not hesitate to contact any of the researchers on the following telephone numbers: Dr Fisher 03 8344 7350, Dr Rowe 03 8344 7350, Ms Holton 03 8344 7389.

It is unlikely that the issues raised in the questionnaire will cause you any distress, but if they do, or you would like to discuss them further, please contact Dr Fisher on the above number who will discuss your concerns. Or you may wish to contact Lifeline (a free 24 hour counselling service) on ph: 13 1114 or Relationships Australia (relationship support services) on ph: 1800 817 569.

Should you have any concerns about the conduct of this study, you are welcome to contact the Executive Officer, Human Research Ethics, the University of Melbourne, on ph: 03 8344 7507 or fax: 03 9347 6739. Should you have any concerns regarding the use of personal information by Commonwealth agencies for the purpose of research you may contact the Federal Privacy Commissioner on ph: 1300 363 992 or email: privacy@privacy.gov.au.

How do I agree to participate?

If you would like to participate in this study please complete the questionnaire and return it to us in the larger (yellow) pre paid envelope provided. By completing the questionnaire and returning it to us you have consented for us to use your data anonymously for research purposes. Please note that a reminder letter will be sent to all participants 3 weeks from the date of this letter.

Thank you for taking the time to read the above information about our study, we hope you will agree to participate.

8.4 APPENDIX 4: SUMMARY OF RESULTS FORM



THE UNIVERSITY OF
MELBOURNE

SUMMARY OF RESULTS FORM

To Have or Not To Have? A Study of Australian Women's Childbearing Decisions

Would you like to receive a summary of the results of this study?

Once the results of this study are analysed, a brief summary of the findings will be available to you. Please complete this form if you would like to receive a summary of the results and return it in the smaller pre paid envelope provided.

Name: _____

Signature: _____ Date: _____

Yes, I would like to receive a summary of the results.

Please send the results to me by:

Email

My email address is:

Post

My postal address is:

Fax

My fax number is:

Key Centre for Women's Health in Society

World Health Organization Collaborating Centre for Women's Health

Department of Public Health

School of Population Health

Faculty of Medicine, Dentistry and Health Sciences

The University of Melbourne

Victoria 3010 Australia

T: +61 3 8344 4333 F: +61 3 9347 9824

W: <http://www.kcwhs.unimelb.edu.au>



key centre for
**WOMEN'S
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in society

8.5 APPENDIX 5: PARTICIPANT NEWSLETTERS

To Have or Not to Have?

A Study of Australian Women's Childbearing Decisions

Newsletter

January 2006

Thank you for recently agreeing to participate in our study *To Have or Not to Have? A Study of Australian Women's Childbearing Decisions*. This newsletter provides you with an update of what's been happening with the study and an overview of what we've found out so far.

Response Rate

We had a fantastic response to our invitation to participate in the study. We appreciate your generosity in sharing your thoughts and opinions with us. We received 569 completed questionnaires which is a response rate of almost 47%.

Preliminary Results

We are still analysing all the data from the questionnaires you sent in but so far some of the interesting results are:

Participant Profile:

The participants of the study are mainly representative of women aged 30-34 years in the general population.

Most participants:

- were married or living with their partner (77%)
- had a post secondary school qualification (68%)
- lived in a major city (72%)
- lived in an area of relative socio-economic advantage (63%)
- owned or were purchasing their own home (70%)
- were born in Australia (91%) (those born overseas were born in 28 different countries)
- were in some type of paid employment (77%) (either full or part time), or were full time mothers (20%)
- were affiliated with a religion (61%).

Motherhood & Children:

Most participants (75%) said they wanted to have children, 18% were not sure about having children, 4% said they didn't want to have children, and 4% said the decision to have or not have children was out of their hands.

Approximately 61.5% of participants had given birth to a child(ren) or were pregnant with their first child. The average number of children a participant had was one, and the maximum number was five. The average age participants were when they gave birth to their first child was 27 years.

38.5% of participants did not have children.

Approximately 15% of participants had tried unsuccessfully to get pregnant for 12 months or more.

The majority of participants (61%) said they were mainly satisfied with the number of children they currently had or their decision not to have children.

Most participants (60%) said they would like to have a child or more children in the future, and their ideal number of children would be two or three. However, not all participants thought it was likely that they actually would have a child or more children in the future.



To Have or Not to Have:

The participants said many different factors influenced their decisions to have or not have children.

Participants gave a range of reasons for not having children, which included:

- health concerns (eg having an inheritable health condition)
- lack of interest in being a mother
- lifestyle factors (eg don't want to give up freedom)
- partner issues (eg partner doesn't want children)
- job concerns (eg don't have a secure job)
- housing issues (eg want to reduce mortgage)

The most important reasons for not having children were:

- not having a partner
- wanting to be financially secure
- wanting to buy a house

Participants gave a range of reasons for having their first child, which included:

- interest in being a mother (eg want to be a mother)
- being able to manage work and family responsibilities (eg have access to good child care)
- lifestyle issues (eg finished travelling)
- social reasons (eg friends having children)

The most important reasons for having the first child were:

- always wanting to have children
- partner wanting children
- wanting to be a mother

Participants gave a range of reasons for having more children after their first child, which included:

- interest in being a mother (eg want more children)
- work and family reasons (eg have a secure job)
- social factors (eg carry on family line)
- lifestyle issues (eg paid or reduced mortgage)

The most important reasons for having more children were:

- not wanting first child to be an only child
- always wanting more than one child
- partner wanting more than one child

The range of factors participants said might influence their decision about having or not

having (more) children in the future included:

- lifestyle issues (eg want to travel)
- partner concerns (eg stability of relationship with partner)
- interest in being a mother (eg previous experience of being a mother)
- social reasons (eg concerns about the environment)

The most important reasons for having or not having children in the future were:

- lack of a partner
- financial concerns
- partner's desires about having children
- participant's age
- participant's health

Pressure from Others to Have Children:

Most participants (73%) said they did not feel any pressure from others to have children. However, the person participants did say put the most pressure on them to have children was their mother. The people who exerted the least amount of pressure were the participants' neighbours.

What's Next

The next stage of the study is for us to finish analysing the data. Sara will then complete and submit her PhD thesis. We will also publish the results in peer reviewed journals.

Further Updates

We plan to send you a final newsletter once we have finished our analysis. If you do not wish to receive this newsletter please contact us on the phone number or email address provided below.

Contact Us

If you would like more details about the study or have any questions about the results so far please do not hesitate to contact us on phone 03 8344 4333 or email s.holton@pgrad.unimelb.edu.au.

Thank you again for your participation and support of our study!

Sara Holton Jane Fisher Heather Rowe

To Have or Not to Have?

A Study of Australian Women's Childbearing Decisions

Newsletter

March 2008

Thank you once again for agreeing to participate in our study *To Have or Not to Have? A Study of Australian Women's Childbearing Decisions*. We have now finished the analysis of the data you provided. This final newsletter provides you with an overview of our major findings.

Participant Profile

As we mentioned in our previous newsletter, the participants of the study included a diverse range of women. Most participants wanted children (75%). Many were mothers or pregnant with their first child (62%).

Participants' Childbearing Aspirations & Expectations

Most participants (71%) said their ideal number of children was two or three. However, the average number of children participants currently had was only one. The age range of the participants (30-35 years) makes it unlikely that most would have completed their childbearing. At the time of the survey most participants (80%) had fewer children than they desired. Yet when the participants were asked if they were likely to have (more) children in the future, most (54%) said they were unlikely to.

Important Factors in Participants' Childbearing Decisions

Beliefs About the Roles of Women:

The participants were asked about their thoughts on the roles, responsibilities and expectations of women. Participants who thought that motherhood was the most important role for women were more likely to be mothers, and want and have larger numbers of children than women who believed that motherhood was only one part of women's lives.

Pressure from Others to Have Children:

Most participants (75%) said they did not feel pressure from others to have children. However, women who did not currently have children felt more pressure than participants who were mothers.

Health Status:

Of the participants who had children, most said being in good health was an important factor in their decision to have their first child (84%), and their decision to have more children after their first child (87%).

Health factors (such as generally poor health or having a health condition which would affect caring for a baby) were some of the main reasons women gave for not having children.

Most participants (74%) said their personal health status was likely to be an important factor in their decision to have or not have (more) children in the future. Participants were more likely to think they would have (more) children in the future if their mental health was good and they rated their own general health as 'excellent'. Participants who had a high number of health conditions and were not very satisfied with their lives were less likely to think they would have (more) children in the future.

Overall, the most important health factor in women's childbearing decisions was their global emotional wellbeing. Participants who had greater life satisfaction and subjective wellbeing were more likely to be mothers,



currently have more children, have a greater desired number of children, and expect to have (more) children in the future.

Why Participants Did Not Have Children:

As we said in the previous newsletter, participants gave a range of reasons for not currently having children including poor health, not having a partner or having an unstable relationship with their partner, and job insecurity.

Many of these reasons actually appear to be obstacles which prevented participants from achieving their ideal reproductive outcomes. The results suggest that women who do not have children do not always choose to be child free. It appears that a number of factors limit women's choice in childbearing decisions. As one participant said "circumstances are the only reason that I don't have children – I want them desperately and always have".

Why Participants Had Their First Child:

The participants gave a range of reasons for having their first child including an interest in being a mother, being able to manage work and family responsibilities, having an established career, and financial security.

The reasons participants gave as important in having their first child imply that their circumstances were favourable to having children. Many participants commented that they had done most of the things they wanted to do at this stage in their lives, and they (and their partner) felt it was the 'right time' and they were 'ready' to have a child.

Why Participants Had More Children:

Participants gave a range of reasons for having more children after their first child including not wanting their first child to be an only child, job security, access to good and affordable child care, and having paid or reduced their house mortgage.

Once again the results indicate that circumstances have to be optimal (that is, no or few barriers to childbearing) before women will consider having more children.

As one participant commented "we were in a position to have more children".

Why Participants Might or Might Not Have Children in the Future:

Participants said that a range of factors might influence their decisions about having or not having (more) children in the future including their previous experience of being a mother, the willingness of their partner to help raise (more) children, the financial cost of raising children, and their age and health.

Participants were more likely to feel they would have (more) children in the future if they thought there were no (major) constraints to their childbearing, while participants who identified factors which were potential obstacles to childbearing were less likely to think they would have (more) children in the future.

Summary:

Our findings suggest that multiple factors such as partner concerns, health issues, housing matters and financial reasons contribute to women's decisions to have or not have children. The importance of these factors varies for each child women have. The results indicate that women often have fewer children than they actually desire, and many would have (more) children if their circumstances were different.

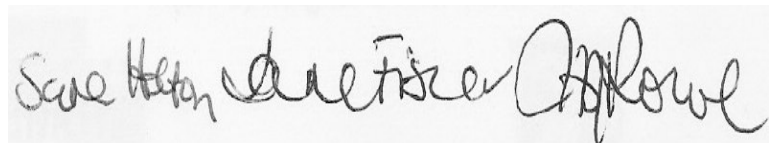
What's Next

We plan to publish the results of the study in peer reviewed journals. We will also present the results at academic conferences.

Contact Us

If you would like more details about the study or have any questions about the results please do not hesitate to contact us on phone 03 8344 4333 or email s.holton@pgrad.unimelb.edu.au.

Thank you again for your participation and support of our study!



Sara Holton Jane Fisher Heather Rowe

8.6 APPENDIX 6: REMINDER LETTER

May 26, 2005



THE UNIVERSITY OF
MELBOURNE

Dear [redacted]

To Have or Not To Have? A Study of Australian Women's Childbearing Decisions

About three weeks ago, we wrote to you asking you to participate in a study we are doing on the factors which are important in Australian women's decisions to have or not have children. If you have already returned your completed questionnaire, please accept our sincere thanks and disregard this letter. If you haven't, we realise that you may not have had time to complete it. However, we would still appreciate hearing from you.

The study is being conducted in order to further our understanding of the factors which are important in Australian women's childbearing decisions, and contribute to our knowledge about why childbearing patterns in Australia are changing and Australia's birth rate has fallen. As you are an Australian woman of childbearing age, information about your decisions is crucial to the success of the study. Therefore, we are writing to you again because the study's usefulness depends on our receiving a completed questionnaire from each participant. Your name was drawn through a random sampling process in which every Victorian woman aged between 30 and 34 years on the Australian Electoral Roll had an equal chance of being drawn. In order for information from the study to be truly representative, it is essential that each person in the sample returns their questionnaire.

The Australian Electoral Commission (AEC) has provided name, address, gender and age-range information for this medical research study in conformity with Item 2 of subsection 90B(4) of the *Commonwealth Electoral Act 1918* and subregulation 10(1) of the *Electoral and Referendum Regulations 1940*.

In the event that your questionnaire has been misplaced, please contact us on telephone 03 8344 7389 or email s.holton@pgrad.unimelb.edu.au and we will post you another one.

We would be happy to answer any questions you have about the study. Please contact us on telephone 03 8344 7389 or email s.holton@pgrad.unimelb.edu.au.

Thank you once again for your interest in this study. We hope you will agree to participate and return your completed questionnaire as soon as possible (if you have not already done so).

Yours sincerely

Ms Sara Holton

Dr Jane Fisher

Dr Heather Rowe

Key Centre for Women's Health in Society

World Health Organization Collaborating Centre for Women's Health

Department of Public Health
School of Population Health
Faculty of Medicine, Dentistry and Health Sciences
The University of Melbourne
Victoria 3010 Australia
T: +61 3 8344 4333 F: +61 3 9347 9824
W: <http://www.kcwhs.unimelb.edu.au>



key centre for
**WOMEN'S
HEALTH**
in society

**8.7 APPENDIX 7: DRAFT ATTITUDES TOWARD WOMEN AND
MOTHERHOOD SCALE – PRINCIPAL COMPONENTS
ANALYSIS**

Table 8.1 Varimax rotated factor matrix of items included in the draft 20 item Scale

Item No.	Item	Component		
		1	2	3
3c	A woman who doesn't want children is unnatural	.700	.168	.149
3e	It is selfish not to want children	.656	.181	.216
3b	<i>A woman can live a full and happy life without ever having children</i>	.649	.058	-.011
3g	<i>It is OK for a woman to choose not to have children</i>	.637	.283	-.027
3a	A woman is not a 'real' woman until she becomes a mother	.629	.257	.095
2a	Whatever career a woman may have, her most important role in life is still that of being a mother	.546	.143	.048
3d	<i>Having children is a small part of being a woman</i>	.473	-.123	-.171
3f	<i>Women should be able to decide if and when they have children</i>	.414	.307	-.157
2d	<i>If both partners in a couple have paid jobs, they should share the housework and care of children equally</i>	.203	.178	-.090
2c	A man should earn more than his partner	.153	.695	.278
2e	Higher education is more important for men than women	.147	.614	.227
2b	<i>It is OK for a woman to have a career and her partner to care for their children</i>	.193	.611	-.122
2h	<i>It is OK for women with young children to work outside the home</i>	.177	.591	-.294
2f	<i>A mother who has a paid job can have as good a relationship with her children as a mother who does not work outside of the home</i>	.124	.549	-.280
2g	A woman should be married before she has children	.280	.423	.169
1b	<i>Women in Australia are able to have both a career and children</i>	-.077	.386	-.356
1a	Women in Australia are viewed more favourably if they have children	.060	.022	.705
1c	Women in Australia are under pressure to have children	-.093	.143	.683
1d	Motherhood is valued in Australia	.143	-.155	.412
1e	<i>Motherhood is just one possible option for women in Australia today</i>	.177	.282	-.288

Note: reversed items are shown in italics

8.8 APPENDIX 8: FINAL ATTITUDES TOWARD WOMEN AND MOTHERHOOD SCALE AND ITEM STATISTICS

Table 8.2 Attitudes toward Women and Motherhood Scale (final 18 item Scale) with item statistics

Item No.	Item	Item Statistics	
		N	Mean SD
These are some statements about women in Australia (in general) today. How much do you agree or disagree with each of these statements?			
1	Women in Australia are viewed more favourably if they have children	559	3.0 0.9
2	<i>Women in Australia are able to have both a career and children</i>	558	3.0 1.0
3	Women in Australia are under pressure to have children	558	2.5 1.0
4	Motherhood is valued in Australia		
These are some statements about roles, responsibilities and expectations of women. How much do you agree or disagree with each of these statements? I think that ...			
5	Whatever career a woman may have, her most important role in life is still that of being a mother	567	2.5 1.3
6	<i>It is OK for a woman to have a career and her partner to care for their children</i>	568	4.2 0.7
7	A man should earn more than his partner	566	4.1 0.9
8	Higher education is more important for men than women	567	4.4 0.8
9	<i>A mother who has a paid job can have as good a relationship with her children as a mother who does not work outside of the home</i>	568	3.7 1.1
10	A woman should be married before she has children	567	3.3 1.2
11	<i>It is OK for women with young children to work outside the home</i>	566	4.0 0.8
These are some statements about women and motherhood. How much do you agree or disagree with each of these statements? I think that ...			
12	A woman is not a 'real woman' until she becomes a mother	568	4.2 0.9
13	<i>A woman can live a full and happy life without ever having children</i>	565	3.7 1.0
14	A woman who doesn't want children is unnatural	567	4.1 0.8
15	<i>Having children is a small part of being a woman</i>	567	3.0 1.0
16	It is selfish not to want children	566	3.9 1.0
17	<i>Women should be able to decide if and when they have children</i>	566	4.5 0.7
18	<i>It is OK for a woman to choose not to have children</i>	567	4.4 0.7

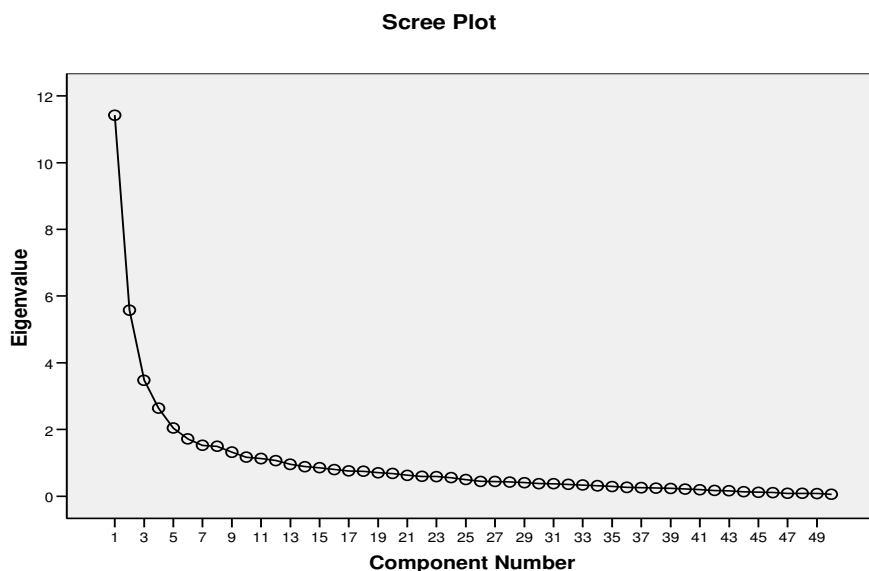
Note: reversed items are marked in italics.

**8.9 APPENDIX 9: PRINCIPAL COMPONENTS ANALYSIS – FACTORS
IMPORTANT IN WOMEN CURRENTLY NOT HAVING CHILDREN**

Participants who did not have children were asked to indicate the importance (on a scale ranging from 'very important' to 'not at all important') of a number (50) of psychosocial and health factors to their childbearing outcomes. The list of fifty items was designed to include the explanatory factors already identified in the literature as well as factors which have not been previously considered.

Prior to performing PCA the suitability of data for factor analysis were assessed. Inspection of the correlation matrix revealed the presence of many coefficients of 0.3 and above. The Kaiser-Meyer-Okin value was 0.82, exceeding the recommended value of 0.6 (Kaiser 1970, 1974) and the Bartlett's Test of Sphericity (Bartlett 1954) reached statistical significance ($p < 0.0001$), supporting the factorability of the correlation matrix.

Principal components analysis revealed the presence of twelve components with eigenvalues exceeding 1, explaining 22.85%, 11.16%, 6.96%, 5.28%, 4.09%, 3.43%, 3.05%, 2.99%, 2.64%, 2.34%, 2.26% and 2.14% of the variance respectively. An inspection of the scree plot revealed a clear break after the sixth component. Using Catell's (1966) scree test, it was decided to retain six components for further investigation.



This was further supported by the results of the Parallel Analysis, which showed only six components with eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size (50 variables x 219 participants).

Table 8.3 Comparison of eigenvalues from PCA and parallel analysis

Component number	Actual eigenvalue from PCA	Criterion value from parallel analysis	Decision
1	11.425	2.0813	accept
2	5.581	1.9666	accept
3	3.478	1.8796	accept
4	2.637	1.8006	accept
5	2.043	1.7356	accept
6	1.715	1.6763	accept
7	1.525	1.6219	reject
8	1.497	1.5753	reject
9	1.320	1.5251	reject
10	1.170	1.4753	reject
11	1.128	1.4332	reject
12	1.067	1.3909	reject

To aid in the interpretation of these six components, Varimax rotation was performed. The rotated solution revealed the presence of a simple structure (Thurstone 1947), with the components showing a number of strong loadings and most variables loading substantially on only one component. Sixteen items (38, 20, 8, 18, 24, 17, 44, 26, 25, 21, 22, 3, 29, 28, 1 and 30) cross loaded on two components. The six component solution explained a total of 53.8% of the variance, with Component 1 contributing 13.8%, Component 2 11.0%, Component 3 8.9%, Component 4 7.3%, Component 5 7.2% and Component 6 5.7%.

Table 8.4 Varimax rotated factor matrix of the items associated with nulliparity

Component Labels & Items	Component					
	1	2	3	4	5	6
Health						
45. health condition could affect baby's wellbeing	.874	.090	.029	.017	-.027	-.038
49. health condition could shorten life span	.852	.149	.027	.109	.078	.018
46. health condition could be transmitted to baby	.846	.109	.015	.075	.075	.012
43. health condition could cause problems in pregnancy	.805	-.020	.107	.133	.020	.034
47. health condition could be inherited by baby	.802	-.018	.009	.149	-.110	.010
48. health condition make it difficult to care for baby	.747	.151	-.013	.096	.099	.097
42. take medication which shouldn't be used during pregnancy	.688	.052	.052	.057	.104	.226
41. treatment for health condition caused fertility problems	.685	.130	.015	.184	.270	.000
40. health condition affects fertility	.617	.029	.005	.095	.175	-.045
50. can't have children	.615	.129	-.164	.153	.151	-.064
38. too old to have children	.470	.139	.148	.043	.162	.300
20. full time carer for family member	.447	.168	-.063	.161	.338	.010
Interest in Motherhood						
9. idea of having children not attractive	.116	.788	.210	.166	.145	-.068
10. no interest in being a mother	.190	.783	.083	.193	.081	-.104
16. too many people bad for the environment	.043	.769	.077	-.050	.017	.151
15. world has too many people	.145	.765	.092	-.054	-.013	.116
14. world not good place to raise children	.122	.719	.138	.053	.142	.141
11. wouldn't make good mother	.145	.675	.204	.203	.128	.077
8. don't like children	.195	.622	.093	.371	.176	-.015
13. friends don't have children	-.063	.479	.137	.040	.241	.136
14. religious views	.124	.344	-.039	.214	.274	.026
Lifestyle						
18. negatively affect current lifestyle	.066	.505	.711	-.003	-.044	-.101
24. establish career before have children	-.024	-.017	.693	.128	.405	.120
17. have to give up freedom to have children	-.014	.484	.685	.001	-.054	.029
44. pregnancy could affect health condition	.013	.325	.678	-.036	-.126	-.188
26. hard to manage work and care for children	.003	.090	.646	.089	.137	.353
25. achieve career goals before have children	-.058	.034	.623	.082	.455	.090
19. want to travel before have children	.022	.143	.605	.082	.264	.071

21. concern about cost of raising children	.047	.228	.550	.118	-.035	.427
22. want to be financially secure before have children	-.018	-.098	.547	.070	.189	.543
Partner						
2. partner doesn't want children	.215	.252	.075	.764	-.043	.016
4. partner won't help raise kids	.078	.276	.129	.716	.057	.236
3. children would upset relationship with partner	.151	.366	.190	.688	-.054	.000
7. relationship with partner not stable	.222	.066	.052	.672	.248	.214
5. recently broken up with partner	.141	-.076	-.021	.662	.253	.047
6. just started new relationship	.194	-.020	.069	.638	.121	.023
Paid Employment/Education						
29. don't have secure job	.307	.256	-.038	-.007	.624	.011
31. want to finish education before have children	.177	.085	.065	.186	.565	-.029
28. want to get a job before have children	.415	.183	-.105	.125	.547	.149
32. have a large education debt	.103	.016	.144	.121	.546	.067
33. want to buy house before have children	.066	.040	.214	.083	.524	.281
23. income is low	.092	.162	.259	.115	.404	.299
1. don't have partner	.049	-.013	-.122	.363	.392	-.176
37. too young to have children	.125	.271	.130	-.071	.365	.180
39. still have plenty of time to have children	-.044	.056	.174	.008	.357	.114
27. employer not family friendly	.134	.104	.270	.050	.345	.213
Housing						
36. want to reduce mortgage before have children	.083	.008	.209	.053	-.014	.704
35. want to move house before have children	.046	.062	-.042	.037	.242	.622
34. want to renovate house before have children	.012	.139	-.051	.078	.072	.618
30. worried about finding good and affordable child care	.060	.040	.374	.048	.170	.468
% of variance explained	13.8%	11.0%	8.9%	7.3%	7.2%	5.7%

Table 8.5 Paired T-tests (nulliparity PCA components)

Pair (Components)	Mean	SD	Std. Error Mean	95% CI of the difference	t	df	Sig.
Lifestyle – Health	-1.4	1.2	0.1	-1.5 to -1.2	-17.3	214	p<0.0001
Lifestyle – Interest in motherhood	-0.9	1.0	0.1	-1.0 to -0.8	-13.7	216	p<0.0001
Lifestyle – Partner	-1.1	1.2	0.1	-1.2 to -0.9	-13.1	215	p<0.0001
Lifestyle – Paid employment/education	-0.9	1.0	0.1	-1.0 to -0.7	-13.2	216	p<0.0001
Lifestyle – Housing	-0.6	1.0	0.1	-0.7 to -0.5	-8.4	212	p<0.0001
Housing – Health	-0.8	1.1	0.1	-0.9 to -0.6	-10.8	212	p<0.0001
Housing – Interest in motherhood	-0.3	1.1	0.1	-0.5 to -0.2	-4.3	212	p<0.0001
Housing – Partner	-0.5	1.2	0.1	-0.6 to -0.3	-5.8	212	p<0.0001
Housing – Paid employment/education	-0.3	0.9	0.1	-0.4 to -0.1	-4.0	212	p<0.0001
Paid employment/education – Health	-0.5	0.8	0.1	-0.6 to -0.4	-9.7	213	p<0.0001
Paid employment/education – Interest in motherhood	-0.1	0.8	0.1	-0.2 to 0.0	-1.2	216	p=.239
Paid employment/education – Partner	-0.2	0.9	0.1	-0.3 to -0.1	-3.2	215	p=.002
Interest in motherhood – Health	-0.4	0.9	0.1	-0.6 to -0.3	-7.0	213	p<0.0001
Interest in motherhood – Partner	-0.1	0.9	0.1	-0.3 to -0.0	-2.2	216	p=.030
Partner – Health	-0.3	1.0	0.1	-0.4 to -0.2	-4.6	213	p<0.0001

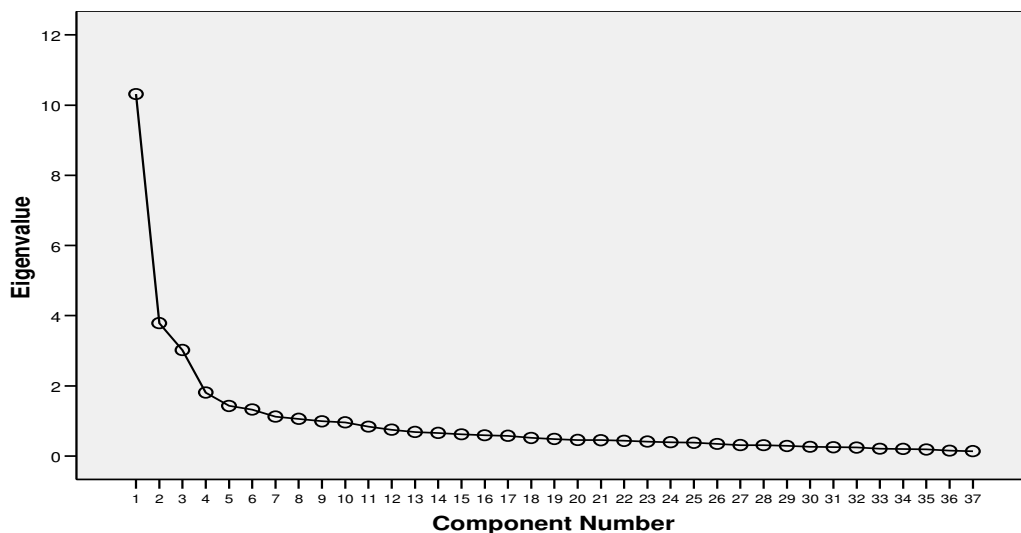
**8.10 APPENDIX 10: PRINCIPAL COMPONENTS ANALYSIS –
FACTORS IMPORTANT IN WOMEN HAVING THEIR FIRST
CHILD**

Participants who had at least one child or were pregnant with their first child were asked to indicate the importance of a number (37) of psychosocial and health factors having their first child. Principal components analysis (PCA) was conducted on the list of 37 psychosocial items in the questionnaire in order to identify the factors which contributed to women having their first child.

Prior to performing the PCA the suitability of data for factor analysis were assessed. Inspection of the correlation matrix revealed the presence of many coefficients of 0.3 and above. The Kaiser-Meyer-Olkin value was 0.89, exceeding the recommended value of 0.6 (Kaiser 1970, 1974) and the Bartlett's Test of Sphericity (Bartlett 1954) reached statistical significance ($p < 0.0001$), supporting the factorability of the correlation matrix.

Principal components analysis revealed the presence of eight components with eigenvalues exceeding 1, explaining 27.88%, 10.24%, 8.16%, 4.89%, 3.87%, 3.59%, 3.04% and 2.86% of the variance respectively. An inspection of the scree plot revealed a break after the fourth component. Using Catell's (Catell 1966) scree test, it was decided to retain four components for further investigation.

Scree Plot



This was further supported by the results of the Parallel Analysis, which showed only four components with eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size (37 variables x 350 participants).

Table 8.6 Comparison of eigenvalues from PCA and parallel analysis

Component number	Actual eigenvalue from PCA	Criterion value from parallel analysis	Decision
1	10.315	1.6825	accept
2	3.787	1.5958	accept
3	3.020	1.5344	accept
4	1.810	1.4822	accept
5	1.431	1.4322	reject
6	1.327	1.3869	reject
7	1.123	1.3481	reject
8	1.059	1.3083	reject

The rotated solution revealed the presence of a simple structure (Thurstone 1947), with the components showing a number of strong loadings and most variables loading substantially on only one component. Fifteen items (9, 11, 22, 23, 36, 20, 21, 3, 37, 1, 32, 19, 33, 30 & 34) cross loaded on two components. The four component solution explained a total of 51.8% of the variance, with Component 1 contributing 16.0%, Component 2 13.3%, Component 3 11.9% and Component 4 10.5%.

Table 8.7 Varimax rotated factor matrix of the items contributing to women having their first child

Component Labels & Items	Component			
	1	2	3	4
Interest in Motherhood				
12. wanted to be a mother	.842	.116	.157	.012
4. I like children	.750	.116	.062	.010
5. I always wanted children	.729	.083	.021	.114
17. thought life would be enriched by children	.714	.021	.178	.077
13. think I would make good mother	.709	.135	.121	.071
18. think children source of fun, pleasure & pride	.688	.150	.177	.113
8. create family of own	.654	.103	.128	.256
9. having children most important thing can do as a woman	.632	.029	.039	.419
11. fulfilment	.618	.072	.096	.349
35. I was in good health	.570	.166	.285	.143
Work & Family				
27. had access to good quality & affordable child care	.071	.776	-.002	-.020
25. my employer family friendly	.153	.767	.138	.000
26. my job was secure	.162	.752	.250	.052
24. able to manage paid work & care for children	.148	.749	.188	-.068
28. finished education	.177	.595	.151	.196
29. paid or reduced debts from education	.050	.572	.130	.228
22. my career was established	.026	.569	.566	.144
23. had achieved career goals	.043	.553	.511	.222
31. had renovated house	.072	.426	.227	.272
36. prognosis of my health condition uncertain	-.035	.346	-.126	.324
Lifestyle				
20. I was financially secure	.124	.304	.760	.096
21. income sufficient to have children	.091	.382	.722	.036
3. partner would help raise children	.356	.079	.612	.001
37. unplanned pregnancy	-.330	.132	-.605	.213
1. partner wanted children	.477	-.065	.529	-.066
32. paid or reduced house mortgage	.079	.431	.513	.184
19. finished travelling	.023	.226	.507	.342
33. right age to have children	.404	.231	.486	.168
30. bought a house	.191	.435	.479	.157
34. shouldn't wait any longer or will be too old to have children	.322	.182	.368	.221
Social				
10. having children make feel grown up	.229	.022	-.127	.691
7. carry on family line	.180	.196	.074	.685
16. think Australia needs more people	.142	.136	-.059	.661
6. children would look after me in my old age	.126	.056	.194	.659
14. children consistent with religious beliefs	.026	.028	.094	.653
15 friends having children	.049	.127	.266	.648
2. strengthen relationship with partner	.265	.024	.080	.395
% variance explained	16.0%	13.3%	11.9%	10.5%

Table 8.8 Paired T-tests (first child PCA components)

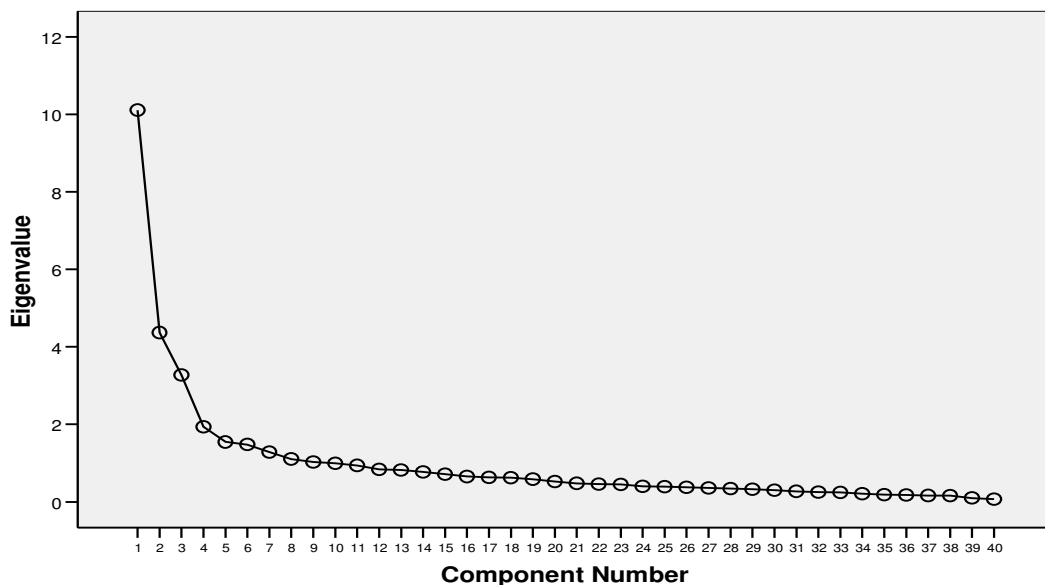
Pair (Components)	Mean	SD	Std. Error Mean	95% CI of the difference	t	df	Sig.
Interest in motherhood – Work and family	-1.5	1.0	0.1	-1.6 to -1.4	-28.3	344	p<0.0001
Interest in motherhood – Lifestyle	-0.8	0.8	0.0	-0.9 to -0.8	-20.9	347	p<0.0001
Interest in motherhood – Social	-1.7	0.8	0.0	-1.8 to -1.6	-41.6	345	p<0.0001
Lifestyle – Work and family	-0.6	0.7	0.0	-0.7 to -0.5	-16.6	344	p<0.0001
Lifestyle – Social	-0.9	0.8	0.0	-1.0 to -0.8	-20.0	345	p<0.0001
Work and family – Social	-0.3	0.9	0.1	-0.4 to -0.2	-5.2	344	p<0.0001

**8.11 APPENDIX 11: PRINCIPAL COMPONENTS ANALYSIS –
FACTORS IMPORTANT IN WOMEN HAVING MORE THAN ONE
CHILD**

Principal components analysis (PCA) was conducted on the list of 40 items in the questionnaire which contributed to the participants having more children after their first child. Prior to performing the PCA the suitability of the data for factor analysis were assessed. Inspection of the correlation matrix revealed the presence of many coefficients of 0.3 and above. The Kaiser-Meyer-Oklin value was 0.85, exceeding the recommended value of 0.6 (Kaiser 1970, 1974) and the Bartlett's Test of Sphericity (Bartlett 1954) reached statistical significance ($p < 0.0001$), supporting the factorability of the correlation matrix.

Principal components analysis revealed the presence of nine components with eigenvalues exceeding 1, explaining 25.28%, 10.93%, 8.19%, 4.85%, 3.86%, 3.70%, 3.22%, 2.77% and 2.57% of the variance respectively. An inspection of the scree plot revealed a clear break after the fourth component. Using Catell's (1966) scree test, it was decided to retain four components for further investigation.

Scree Plot



This was further supported by the results of the Parallel Analysis, which showed only four components with eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size (40 variables x 236 participants).

Table 8.9 Comparison of eigenvalues from PCA and parallel analysis

Component number	Actual eigenvalue from PCA	Criterion value from parallel analysis	Decision
1	10.114	1.8842	accept
2	4.371	1.7798	accept
3	3.276	1.6983	accept
4	1.939	1.6332	accept
5	1.546	1.5712	reject
6	1.481	1.5195	reject
7	1.289	1.4675	reject
8	1.108	1.4191	reject
9	1.028	1.3741	reject

To aid in the interpretation of these four components, Varimax rotation was performed. The rotated solution revealed the presence of a simple structure (Thurstone 1947), with the components showing a number of strong loadings and most variables loading substantially on only one component. The four component solution explained a total of 49.3% of the variance, with Component 1 contributing 15.6%, Component 2 13.3%, Component 3 11.7% and Component 4 8.7%.

Table 8.10 Varimax rotated factor matrix of the items contributing to women having their second child and subsequent children

Component Labels & Items	Component			
	1	2	3	4
Interest in Motherhood				
16. want to be a mother to more children	.786	.093	.118	.084
22. more children would be a source of fun, pleasure & pride	.763	.095	.127	-.031
21. life would be enriched by more children	.757	.113	.165	.095
4. I like children	.719	.113	-.030	.084
5. always wanted more than one child	.673	.096	-.017	.066
11. think I am a good mother	.624	.104	.097	-.002
12. create a family of my own	.594	-.051	.274	.148
38. I was in good health	.582	.145	.132	.370
15. more children make me feel fulfilled	.578	.081	.398	.126
6. wanted more children than already have	.564	.034	-.014	.133
13. having children is the most important thing I can do as a woman	.539	.029	.444	.163
37. right age to have more children	.518	.152	.244	.409
1. partner wanted more children	.499	.043	.004	.263
9. didn't want first child to be an only child	.442	-.040	.174	.009
3. partner would help raise more children	.353	.117	.084	.287
Work & Family				
30. had a secure job	.109	.885	-.016	.053
28. able to manage paid work and care for children	.142	.842	.011	.015
31. had access to good quality and affordable child care	.062	.830	-.020	-.046
29. employer family friendly	.109	.827	-.004	.071
26. career established	.040	.800	.086	.298
27. achieved career goals	.089	.753	.141	.354
32. finished education	.094	.573	.176	.264
33. paid or reduced debts from education	.038	.476	.138	.297
Social				
11. carry on family line	.153	.025	.750	.182
14. having more children make feel grown up	.119	.050	.743	.120
10. children will look after me in my old age	.075	-.033	.713	.223
19. friends having more children	.076	.058	.709	-.038
20. Australia needs more people	.131	.140	.684	.046
18. having more children in line with religious beliefs	.130	-.044	.584	.082

7. wanted child of opposite sex to that already have	.057	-.023	.518	-.028
23. finished travelling	.083	.376	.420	.276
2. strengthen relationship with partner	.319	.034	.408	.116
8. right age gap between children	.253	.120	.370	.281
39. prognosis of health condition uncertain	.010	.200	.315	-.083
Lifestyle				
36. paid or reduced mortgage	.100	.138	.198	.749
34. bought house	.193	.167	.136	.732
24. financially secure	.247	.244	-.041	.676
25. sufficient income to have more children	.323	.410	-.039	.548
35. renovated house	.023	.158	.221	.524
40. pregnancy unplanned	-.279	.141	.303	-.366
% variance explained	15.6%	13.3%	11.7%	8.7%

Table 8.11 Paired T-tests (subsequent children PCA components)

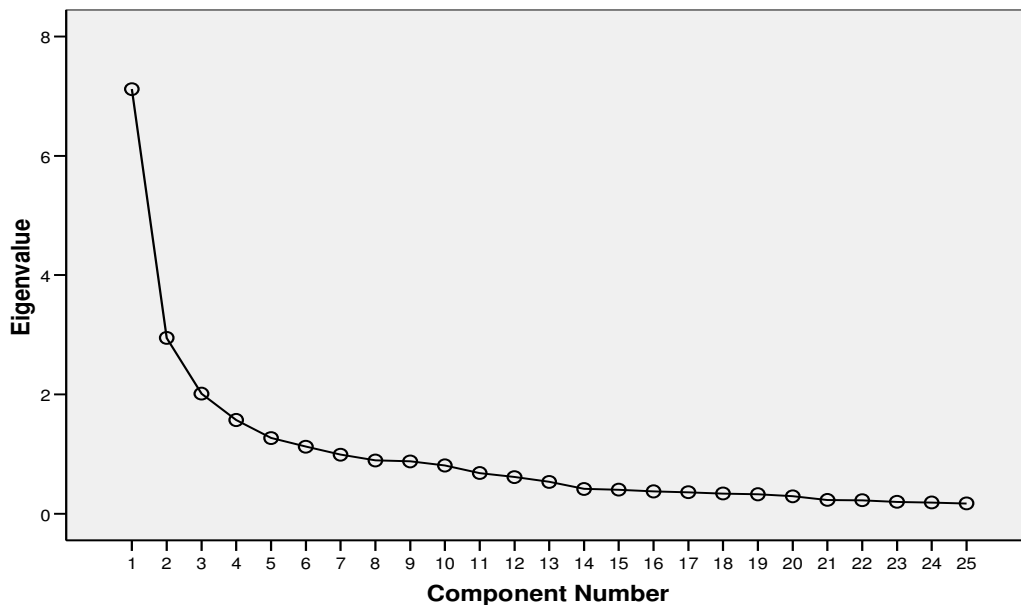
Pair (Components)	Mean	SD	Std. Error Mean	95% CI of the difference	t	df	Sig.
Interest in motherhood – Work and family	-1.3	1.1	0.1	-1.4 to -1.1	-17.4	218	p<0.0001
Interest in motherhood – Social	-1.7	0.7	0.0	-1.8 to -1.6	-38.0	222	p<0.0001
Interest in motherhood – Lifestyle	-1.1	0.8	0.1	-1.2 to -1.0	-20.4	219	p<0.0001
Lifestyle – Work and family	-0.2	1.0	0.1	-0.3 to -0.1	-2.9	218	p=.004
Lifestyle – Social	-0.6	0.8	0.1	-0.7 to -0.5	-10.8	218	p<0.0001
Work and family – Social	-0.4	1.1	0.1	-0.5 to -0.3	-5.3	218	p<0.0001

**8.12 APPENDIX 12: PRINCIPAL COMPONENTS ANALYSIS –
FACTORS WHICH MAY CONTRIBUTE TO HAVING CHILDREN
IN THE FUTURE**

Principal components analysis (PCA) was performed on the list of 25 psychosocial and health items in the questionnaire in order to identify the factors which are likely to contribute to women's future childbearing decisions. Prior to performing PCA the suitability of data for factor analysis were assessed. Inspection of the correlation matrix revealed the presence of many coefficients of 0.3 and above. The Kaiser-Meyer-Okin value was 0.86, exceeding the recommended value of 0.6 (Kaiser 1970, 1974) and the Bartlett's Test of Sphericity (Bartlett 1954) reached statistical significance ($p < 0.0001$), supporting the factorability of the correlation matrix.

Principal components analysis revealed the presence of six components with eigenvalues exceeding 1, explaining 28.47%, 11.79%, 8.05%, 6.29%, 5.08% and 4.50% of the variance respectively. An inspection of the scree plot revealed a clear break after the fourth component. Using Catell's (1966) scree test, it was decided to retain four components for further investigation.

Scree Plot



The results of the Parallel Analysis showed five components with eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size (25 variables x 569 participants).

Table 8.12 Comparison of eigenvalues from PCA and parallel analysis

Component number	Actual eigenvalue from PCA	Criterion value from parallel analysis	Decision
1	7.117	1.4008	accept
2	2.948	1.3436	accept
3	2.013	1.2944	accept
4	1.572	1.2537	accept
5	1.269	1.2174	accept
6	1.125	1.1815	reject

Although the parallel analysis indicated that five components should be retained, it was decided to retain only four components as indicated by the scree test as the four component solution established more meaningful groups than the five component solution.

To aid in the interpretation of these four components, Varimax rotation was performed. The rotated solution revealed the presence of a simple structure (Thurstone 1947), with the components showing a number of strong loadings and most variables loading substantially on only one component. The four component solution explained a total of 54.6% of the variance, with Component 1 contributing 18.6%, Component 2 16.0%, Component 3 10.2% and Component 4 9.9%.

Table 8.13 Varimax rotated factor matrix of the items likely to contribute to future childbearing decisions

	Component			
	1	2	3	4
Lifestyle				
19. able to manage paid work with caring for children	.807	.180	-.114	.003
18. career or work issues	.804	.030	.082	.059
20. child care issues	.731	.251	-.134	.024
17. financial concerns	.701	.257	.115	-.083
14. want to maintain current lifestyle	.683	-.037	.441	.188
22. housing concerns	.618	.216	.037	.053
13. want to maintain freedom	.610	-.084	.427	.297
15. want to travel	.608	-.078	.335	.262
21. education issues	.398	.048	.194	.227
Partner				
5. stability of relationship with partner	.179	.761	.304	-.020
4. partner's willingness to help raise children	.170	.739	.308	.024
2. partner's desires about having children	.141	.719	.214	.088
24. my health	.293	.658	-.016	.134
3. effect of children on relationship with partner	.198	.641	.389	.013
23. my age	.368	.554	-.158	.148
7. level of interest in being a mother	.025	.542	.474	.162
1. no partner	-.028	.456	-.041	.094
25. unable to have children	-.140	.271	-.032	.221
Interest in Motherhood				
8. previous experience of being a mother	-.029	.282	.729	.001
16. existing care responsibilities	.279	.096	.679	.005
6. like or dislike of children	.043	.499	.524	.164
Social				
11. concern about population issues	.166	.034	-.021	.836
12. concerns about the environment	.249	.085	.050	.776
10. friends having children	.139	.143	.006	.670
9. religious beliefs	-.123	.217	.233	.543
% variance explained	18.6%	16.0%	10.2%	9.9%

Table 8.14 Paired T-tests (future children PCA components)

Pair (Components)	Mean	SD	Std. Error Mean	95% CI of the difference	t	df	Sig.
Partner – Lifestyle	-0.9	1.0	0.1	-1.0 to -0.8	-13.2	217	p<0.0001
Partner – Interest in motherhood	-0.5	1.1	0.1	-0.6 to -0.5	-12.0	559	p<0.0001
Partner – Social	-1.7	1.0	0.0	-1.8 to -1.6	-40.1	558	p<0.0001
Lifestyle – Interest in motherhood	-0.1	1.3	0.1	-0.1 to -0.1	-0.5	558	p=.589
Lifestyle – Social	-1.2	1.0	0.0	-1.3 to -1.1	-27.7	558	p<0.0001
Interest in motherhood – Social	-1.2	1.3	0.1	-1.3 to -1.0	-20.7	557	p<0.0001

9 GLOSSARY

Many terms regarding childbearing and fertility are used interchangeably in the existing literature, or defined differently depending on the author or discipline of the text. The following is a list of the key terms and their definitions (unless otherwise specified in the text) used in this thesis. These terms and their definitions have been derived from various sources listed in the Reference section.

Childbearing desires

Wishes for children. Wanting or not wanting to have a child(ren)

Childbearing ideals

Inclinations towards childbearing that are removed as much as possible from circumstances, that is, what women want regardless of apparent constraints, and include the ‘ideal’ (perfect) number of children.

Childbearing preferences

Inclinations toward having or not having children (the same as childbearing desires)

Childbearing aspirations

Wishes about having or not having children (the same as childbearing desires)

Childbearing intentions

Planned actions toward having or not having children.

Often used synonymously in the literature with childbearing ‘expectations’.

Childbearing expectations

Anticipation or perceived likelihood of having or not having a child(ren) in the future. Expectations include acknowledgement of the chance of success in achieving desired childbearing outcome(s).

Childbearing outcomes

The actual number of children a woman has.

Childbearing behaviour

Actions taken regarding having or not having children.

Fertility decision-making

The process of choosing between having a child(ren) or not having a child(ren), and taking action.

Childbearing/fertility

Used interchangeably in this thesis to mean having children



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HOLTON, SARA

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To have or not to have?: Australian women's childbearing desires, outcomes and expectations

Date:

2010

Citation:

Holton, S. (2010). To have or not to have?: Australian women's childbearing desires, outcomes and expectations. PhD thesis, Centre for Women's Health, Gender and Society, School of Population Health, Faculty of Medicine, Dentistry, and Health Sciences, The University of Melbourne.

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