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Well-being and regrets of mature women:

A comparison of childless women and mothers in middle to late life.

by

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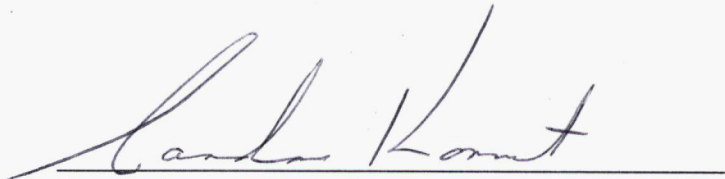
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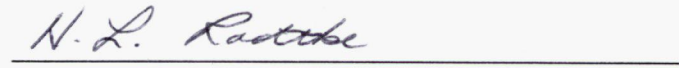
THE UNIVERSITY OF CALGARY

FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "Well-being and regrets of mature women: A comparison of childless women and mothers in middle to late life" submitted by Sherryl Anne Jeffries in partial fulfillment of the requirements for the degree of Master of Science.


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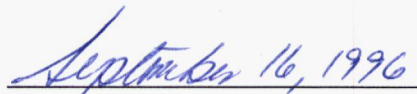
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Abstract

A common assumption, based on social biases and inadequate previous research, is that many older childless women regret not having children and that these regrets increase with age. To investigate this assumption, 72 middle-aged and older women divided between mothers, voluntarily childless (VC), and involuntarily childless (INV) women completed multi-dimensional measures of psychological well-being, a regret questionnaire, and a semi-structured interview.

Contrary to previous research, most childless women did not experience regrets about being childless. This was particularly true of the VC. The vast majority of middle-aged VC and all of the older VC experienced either no regrets or regrets that were minor in importance and fading.

Multi-dimensional measures of psychological well-being indicated that INV were functioning as well as a reference normative population. The VC were functioning significantly better on dimensions of autonomy and environmental mastery. There were few age differences apparent with this participant sample.

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I would also like to extend my sincere thanks to all the women who participated in this study, for their generosity of spirit in sharing a portion of their lives with me, and the wonderful coffee and tea that they prepared for me during our hours together.

Most of all I would like to thank my husband and my parents. Without their moral support I would have found this task to be far more daunting than it already was.

Dedication

This thesis is dedicated to my husband, Ron Licht, whose incredible patience, love and support have helped me throughout the years of our marriage and throughout the preparation, research, and completion of this document.

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Well-being and regrets of mature women:

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Overview and Significance of the Research

Still, if I don't have children, who will be there for me as I grow older? I think about the traditional transitions of a woman's life as she shifts from single woman to wife to mother to grandmother, and I wonder what milestones will mark the years of my life ... I like the comfort of road maps. And in this culture, there are none for childless women (Griffin, 1996, p. 100).

This quote illustrates a common concern of voluntarily childless women: Will they live to regret their decision? (Jeffries, 1994). There is an assumption, a "rhetoric that sentences childless women to a lifetime of regret" (Morell, 1994, p. 95). This assumption that a woman might regret being childless when she is older may or may not be true.

To date, only one study has directly examined childlessness and its relation to late life regret. Alexander, Rubinstein, Goodman and Luborsky (1992) examined narratives collected from 90 women 60 years of age and over. The researchers found that elder childless women did regret their childless state. Some of these women's regrets were reported as less intense than when they were younger, however the more common theme was that the intensity of regret had increased with age. Regrets centered around three main areas: life review issues -- re-evaluation and reappraisal of their lives in terms of culturally constructed notions of fulfillment; dependency and caring -- the lack of children to look after and support these women in later life; and generational continuity -- the

inability to transmit the family name and traditions. Alexander et al. (1992) found that these regrets were experienced within a context of social marginalization; the life course of these women had not followed the dominant life trajectory for women, and they felt left out.

While this study is both unique and informative, it leaves some important questions unanswered. Though the study purports to address the regrets experienced by elder childless women, in fact, it really addresses only a portion of childless elder women. The vast majority of women in the study were childless for reasons other than their own choice. Only 7 married or widowed women (out of 60) in this sample had not desired to have children. The other 53 women were childless for a variety of reasons: the husband did not want children ($N = 3$); they were unable to conceive or have a successful pregnancy ($N = 25$); they were past childbearing age at marriage ($N = 20$); other health factors ($N = 7$); or they were widowed early in marriage ($N = 2$). In addition, the 30 single women in the sample did not envision childbearing outside of marriage as a viable alternative. It is unknown whether some of these single women were childless because they were single, or if they were single because they were not highly motivated to have children. Reading between the lines, however, it seems a fairly safe assumption that most of the women in this study wanted to have children but were unable for various reasons to have them. The conclusion that these women experienced regret should not necessarily be generalized to all older childless women, but only to women who wanted children but were unable to have them.

So the question of whether a woman will regret in later life the voluntary decision to remain childless is still unanswered. The present study will endeavor, in part, to answer this question. Does a woman who has chosen to remain childless experience regrets about this decision later in her life, or is the experience of regret limited to those women who would have had children if they were in a position to do so. Therefore, the present study examined the question of regrets for both voluntarily and involuntarily childless women.

In this study the psychological well-being and regrets of voluntarily childless women, involuntarily childless women, and mothers, between the ages of 45 and 83, were examined. Each woman was questioned about why she had children or remained childless. Psychological well-being was assessed via a multidimensional theoretically driven measure (Ryff, 1995, personal communication) and regrets were examined by both questionnaire and semi-structured interview. The combination of questionnaire and interview formats permitted a detailed and complete evaluation of the regrets of middle-aged and older childless women and mothers.

Life-span Developmental Theories and Pronatalism

There is little question that we live in a pronatalist society, that the motherhood mandate holds sway, and that women who are childless do not fit the “normal” developmental course for women (Alexander et al., 1992; Callan, 1983; Campbell, 1983; Houseknecht, 1977; Ireland, 1993; Kearney, 1979; May, 1995; Morell, 1994; Rowland, 1982; Russo, 1979; Veevers, 1975, 1980). Feminist writers have argued that much of the existing research on childlessness in young women, especially that on voluntary

childlessness, has been colored by the inherent pronatalistic bias of our present theories of adult life span development (Ireland, 1993; May, 1995; Morell, 1994; Rowland, 1982; Veevers, 1980).

Many life span theories assume that parenthood is part of adulthood (Rowland, 1982), as it is for most adults, and interpret adult development, at least in part, through parental roles. For example, Rossi (1980), in an application of life-span developmental theory to women's lives, chose a sample that consisted entirely of mothers, yet generalized her findings to all women. As well, Havighurst (1972) sees parental roles as integral developmental tasks of adulthood. Starting a family and rearing children are described as two tasks of early adulthood (18 to 35 years) and assisting teenage children to become responsible and happy adults is one of the tasks of middle adulthood (35 to 60 years). Successful completion of the major accomplishments required of an individual contribute to both current and future life satisfaction. The childless adult is left out of these specific adult developmental tasks; thus implying that the childless adult is missing out on many of the learning experiences of adulthood.

Neugarten (1976) described the "social clock" and the social age norms that can be inferred from society's expectations. She reported that normative "on-time" events, those that occur when they should, do not cause undue stress in an individual's life. However, "off-time" events, those which occur too early or too late or maybe not at all, are likely to result in stress which occurs because the individual is "out of step" with their age peers. As most young adults in our society marry and have children during their twenties or

thirties, not becoming a parent during these decades may be stressful to some childless women.

Erik Erikson's Stages of Psychosocial Development

The life-span developmental theory most salient to the theoretical underpinnings of this study is Erik Erikson's (1968) stages of psychosocial development. Erikson divided the human life span into eight psychosocial stages -- five stages that span childhood and three that span adulthood. Through successful resolution of each psychosocial stage crisis, the human ego can adaptively grow and develop throughout life. The "crisis" that Erikson envisioned was that of a "turning point" in life where the individual is free to choose an adaptive or maladaptive manner of dealing with environmental challenge (Lemme, 1995). Successful resolution of each crisis depends both on one's current situation in life, as well as the successful resolution of earlier stages.

A point to be made about Erikson's theory is that each stage is not necessarily specific to a certain age, nor is it necessarily unidirectional (Whitbourne, Zuschlag, Elliot, & Waterman, 1992). Individuals can and will work on resolving more than one crisis at any one time, though a specific crisis may be pre-eminent at certain ages and during certain life events. Also, it is possible that issues dealt with earlier in life will re-emerge in a different guise later on. For example, an adult who has experienced divorce in their mid-40's may need to re-negotiate the stage of "intimacy versus isolation", a crisis usually associated with young adulthood. Whitbourne et al. (1992), in a sequential empirical validation of Erikson's stage theory with adults aged 20 to 42, comment:

The most likely ... explanation is the proposition that the sequencing of Erikson's (1963) stages is not unidirectional and that there is not an epigenetic unfolding of developmental issues. Rather, all psychosocial issues can reach ascendancy at any particular time in the individual's life, depending on unique factors specific to that individual's biological, psychological, or social trajectories. The issues identified with any prior (and possibly future) stage of development may take priority over the stage concerns nominally identified with the individual's current developmental stage (p. 270).

In the present study the stages of interest are primarily the last two stages of adult development -- the 7th stage of "generativity versus self-absorption / stagnation" and the 8th stage of "ego integrity versus despair".

Erikson's 7th stage of adult development, that of "generativity versus self-absorption / stagnation" is theorized to be the developmental crisis of middle adulthood -- about age 40 to 65 years. The challenge, prompted by a growing awareness of mortality, is to develop a concern about future generations and leave one's mark behind. Core behaviors and attitudes would indicate caring and concern for others, and living a productive life that contributes to society (Hamachek, 1990). The emerging ego strength of this stage is care. Unsuccessful resolution of this challenge leaves one focused only on their own needs and desires. Erik Erikson's own explanation of "generativity" (Evans, 1981, p. 51, as cited in Hamachek, 1990, p. 681) is when:

... one begins to take one's place in society, and to help in the development and perfection of whatever it produces. And one takes responsibility for that. I know that generativity is not an elegant word, but it means to generate in the most inclusive sense ... I use the word "generativity" because I mean everything that is generated from generation to generation: children, products, ideas and works of art.

Generativity does not necessarily presume parenthood. Though Erikson believed in the instinctual drive for women to have children, the mere presence of children in a person's life does not automatically resolve the developmental crisis.

Still, many explanations and interpretations of "generativity" describe it as an interest in procreation and development of the next generation (Benjamin, Hopkins, & Nation, 1990; Rowland, 1982; Schultz & Ewen, 1988), in guiding the next generation (Burger, 1993), or in leaving one's mark by producing children or occupational accomplishments (Kimmel, 1990). Kotre (1984, as cited in Lemme, 1995) lists four types of generativity, two of which are parental, the bearing of offspring and parenting them, and two of which are ways in which a person can express the need for generativity whether or not they have children of their own. These are technical generativity, teaching skills to others less advanced, and cultural generativity, mentoring or passing the culture on to successors. Unfortunately, Hamachek (1990) indicated that those who fail to resolve this psychosocial crisis and are therefore self-absorbed and stagnant "have little interest in producing or caring for children of their own [and] they show little by way of a

parental kind of concern for the children of others” (p. 679, contents in brackets added for clarity). This view is unfortunate simply because the absence of children, or the desire for children, does not necessarily preclude successful resolution of this developmental stage, just as the presence of children does not guarantee successful resolution. Hamachek (1990) did, however, list eight other behaviors that do demonstrate generativity without the need for the presence of children, including being interested in how to make the world a better place for future generations, leading productive lives, contributing to society, giving to others, displaying other-centered values and attitudes, and developing creative talents. So, although these theories recognize that having children is not a requirement for generativity, there is the implicit assumption that the having children is the preferred route to the resolution of this crisis, and therefore, the childless individual would in a disadvantaged position.

Successful resolution of the stage of “generativity versus self-absorption / stagnation” leads to the 8th and final developmental stage of adult life, that of “ego integrity versus despair” during the retirement years, age 65 and beyond. The emerging ego strength of this last stage of life is wisdom. At this point, individuals review their lives and conclude either that life was worth living and had value, or that life was unsatisfying, full of regret and a disappointment. The optimal outcome is to say ““Yes, I have made mistakes, but given the circumstances and who I was at the time, the mistakes were inevitable. I accept responsibility for them, along with the good things that have happened in my life”” (Hamachek, 1990, p. 681). In this final stage of life, the individual takes stock

of his or her life and makes sense of it. Butler (1963) described life review as a natural process as life progresses toward old age, and that unresolved conflicts from the past can resurface and affect life satisfaction in later life. It is the resolution of these conflicts that enable the older individual to achieve what has been termed “congruence”, very similar to ego-integrity (Neugarten, Havighurst & Tobin, 1961), the ability to feel satisfied that life has gone as it should, that the ideal wishes of life are congruent with the reality of life and that the individual is satisfied.

In our pronatalist society, motherhood is the route taken by the majority of adult women. Our society is structured to encourage its citizens to procreate. This is the “normative” path for women. However, there has always been a minority of women who have not had children. Some of these women did not have children because they did not wish to become mothers, whereas other women were unable to have children for various reasons. Though having children is not a requirement for generativity, as was discussed earlier, there is an assumption that it is the preferred route to the resolution of the “generativity versus stagnation” crisis and the achievement of ego-integrity. Therefore, by this logic the childless individual is disadvantaged.

The pronatalist bias of expecting that the lack of children should be viewed with regret by both voluntarily and involuntarily childless women in later life has been neither satisfactorily nor fully examined. Society seems to assume that a childless life is unfulfilled. Jamison, Franzini and Kaplan (1979) in a study of stereotypes of the voluntarily childless presented matched narratives, describing either a mother of two or a

voluntarily childless woman, to university undergraduates who were asked to characterize the individuals in the narratives. The childless woman was perceived as being significantly less sensitive and loving, less typically an American woman, more likely to be active in the women's liberation movement, more selfish, less happy, less well adjusted, less likely to get along with her parents, and less likely to be happy and satisfied at 65 than the identically described mother.

That voluntary childlessness has been considered abnormal can be supported by the presence of two studies with younger samples that attempt to pathologize voluntary childlessness. In an Australian study, Smith (1983) cited lack of satisfactory mothering in childhood as an unconscious motivation for women to remain childless and recommended reeducative therapy to "cure" these women. In a similar tone of searching for abnormality, Peterson (1980) gave the MMPI to university undergraduates and questioned them about their parenthood intentions. The small number of students who intended not to be parents, says Peterson, frequently responded in ways that were similar to disturbed populations, and were statistically deviant or disturbed on measures of psychopathology. Moderate scale elevations, on scale 4 -- Psychopathic Deviance, were such that they could be interpreted in the manner in which Peterson did, or alternatively they could be interpreted as a measure of rebelliousness, social poise and confidence.

Further, an expectation exists that one of the many reasons that people have children is to have someone to look after them and keep them company in old age . This

argument, in part, prompts the assumption that childless women will regret having no children when they get older, whether they are childless voluntarily or involuntarily.

There is another way to look at the situation. Voluntarily childless women have actively chosen to reject the motherhood mandate and follow a childless life. This was a path that these women desired to follow -- they do not “lack” children in their lives. Voluntarily childless women have had to actively defend their life choice to remain childless against many societal sanctions (Houseknecht, 1977; Callan, 1983; Campbell, 1983; Veevers, 1975, 1980). Is it logical to expect that these women will feel the loss of children in their lives as much as society seems to assume? This expectation of regret needs to be examined empirically.

Involuntarily childless women, on the other hand, wanted to follow the life course that most women follow. They accepted the motherhood mandate and wanted to participate in it, but were unable to do so. There is a “lack” or absence of children in these women’s lives -- the child they wanted to have but never did. It is likely that these are the childless elder women who will experience regret, however this too needs to be examined.

Definition of Terms

While the distinction between voluntary childlessness and involuntary childlessness may appear uncomplicated, this is not necessarily so. The definitions of voluntary and involuntary childlessness used in the literature need to be reviewed and related to the definitions that were used in this study.

Voluntary Childlessness

In research on women within their childbearing years the main definitions of voluntary childlessness are provided by Houseknecht (1977, 1979b) and Veevers (1980). There are primarily two routes through which women come to be voluntarily childless. The women taking these routes have been described as early articulators and postponers.

Early articulators are women who decide before marriage, in many cases as early as adolescence, that they do not want to have children. Early articulators tend to make childlessness a condition of marriage - they are looking for like-minded men. This may make it more difficult for some of these women to find mates, or they may in fact decide to remain single (Callan, 1986). This group of young single, voluntarily childless, women has been virtually ignored in the literature as many studies of the voluntarily childless focus on women who have been married for at least five years and who have therefore, at least partly, "proven" that they are committed to the childless state (Campbell, 1983; Houseknecht, 1979b; Veevers, 1975, 1980).

Bram (1985) found that the early decision to remain childless is fairly stable over time. While she did not specifically identify her participants as early articulators, the men and women in her study were in their mid-twenties and married for an average of only 3.5 years at the onset of her seven year longitudinal study. Bram found that 71.4% of her sample of 49 voluntarily childless men and women were still childless and intended to remain so, seven years later, indicating that the decision to remain childless is stable over time. Of the voluntarily childless men and women, 14.3% still had no children but stated

that they expected to have children in the future, and 14.3% had had children in the interim.

Postponers are women who chose to remain childless after they were married and had developed a preferred lifestyle that did not include children. This is the path taken by the majority of voluntarily childless women, the decision not to have children is made through discussions with their spouse and after both members of the couple have experienced ambivalence about childbearing for a number of years (Veevers, 1980). Both Houseknecht (1977) and Veevers (1980) found that the majority of their participants, two thirds, were postponers, in that they had decided not to have children after marriage. The main difference, then, in whether a woman is an early articulator or a postponer, is the timing of the decision -- before marriage or after marriage.

There were two main criteria for voluntary childlessness used in this study. First, a voluntarily childless woman viewed her childless state as something she had chosen -- she defined herself as "childless by choice". In no way was childlessness against her wishes. Second, a voluntarily childless women did not attempt to become pregnant as she was not interested in having children. Whether a woman decided early that she was not having children, or whether she decided after marriage, she practiced some form of birth control throughout her fertile years.

Involuntary Childlessness

There really is no definition of involuntary childlessness that encompasses all of the reasons a woman might be childless against her wishes. The definition of involuntary

childlessness used in this study encompassed, and went beyond, the basic definition of infertility. To begin with, any woman that identified herself as childless “not by choice” was considered involuntarily childless. In addition, Beckman and Houser (1982) provide a good definition that was adopted for this study. “Any childless woman who stated one or more of the following reasons for not having children was considered involuntarily childless: (a) it was physically impossible for her or her husband to have children, (b) she had problems getting pregnant or carrying a pregnancy to term, (c) she was too old at age of marriage to have children [and stated that she had wanted to have children], (d) she did not use contraception but never became pregnant, or (e) she tried (or wanted) to adopt a child but was unable to do so.”(p. 249, contents of square brackets added for clarification of the definition used in this study, round brackets in the original). Other reasons for being involuntarily childless might include not being able to find a husband at all, or finding a husband that did not want children. Also, an early ending to a marriage through divorce, separation or widowhood might place the woman in a situation where she was unable to have the children she wanted. All of these women were considered involuntarily childless, as they did not embrace the childless life voluntarily.

As can be seen from the definitions of voluntary and involuntary childlessness, there are highly different motivations experienced by childless women. Obviously, these motivations must be considered when evaluating regret in childless women.

Prevalence of childlessness

Historically, the women and men who have the most control over their reproductive destinies are those in the middle and upper socio-economic classes. Not surprisingly, most of the research on voluntary childlessness has focused on middle and upper middle class, primarily Caucasian, men and women and therefore may not be generalizable beyond these groups.

Unfortunately much of the research on voluntary childlessness and older childless women is quite dated. Most of the available research on this topic was published in the late 1970's and the first half of the 1980's. Since 1987, however, there has been little research on voluntary childlessness and childless older women. A comprehensive search of the literature identified 20 references pertaining to voluntary childlessness or childlessness in the elderly between 1988 and 1996, in contrast to 95 references between 1973 and 1987.

Within this dated literature, fairly good population estimates exist of how widespread voluntary childlessness is. Estimates of the percentage of ever-married, white, American women who were committed to voluntary childlessness in the early 1970's ranged from approximately 3% to 6% (Poston & Kramer, 1983). British figures for 1974 and 1984 were slightly higher with 5% to 7% of married women stating that they did not want to have children (Kiernan, 1989). Gerson (1980) obtained similar results in a study of expressed desire for children in female university undergraduates. She found that 9% of her research participants did not want children at all.

Conversely, approximately 10% of married women of childbearing age in the United States are infertile (Abbey, Andrews, & Halman, 1992). The failure to conceive after a year of regular uncontracepted intercourse is commonly used as the definition of infertility. Approximately half of the infertile couples will eventually conceive and deliver (Abbey et al., 1992).

Estimates of the percentage of elder ever married women who are childless range between 16% to 20% (Alexander et al., 1992; Kiernan, 1989; Veevers, 1972). However, there are no epidemiological estimates of the percentage of elder women who are voluntarily or involuntarily childless. The two available studies found that approximately 8% to 10% of their samples of elder women were voluntarily childless (Alexander et al., 1992; Connidis & McMullin, 1993). Obviously, no generalizations can be made from these numbers to the general population of elderly women.

Voluntary Childlessness

Research into voluntary childlessness can be organized into two main categories: 1) studies which involved the voluntarily childless alone; and 2) comparative studies focused on identifying differences between characteristics of the voluntarily childless and parents, or those who wish to become parents. The body of research on voluntary childlessness has primarily examined voluntary childlessness in pre-menopausal women -- women still within their fertile years.

Studies of the Voluntarily Childless Only

The first area of research looks only at those who are voluntarily childless and presents data describing only this group; no comparison is made to other groups (Campbell, 1983; Houseknecht, 1977, 1979b; Morell, 1994; Veevers, 1975, 1980).

As previously discussed Houseknecht (1977, 1979b) described the two main routes through which women decide to remain voluntarily childless, and named the groups early articulators and postponers. She also described other differences between early articulators (women that decide early in life that they do not want children) and postponers (women who decide after marriage and some ambivalence about childbearing). Houseknecht (1979b) found that early articulators reported more parental demands for achievement efforts and less warmth in their family of origin than did postponers. However, achievement motivation and autonomy characterized both groups.

How do voluntarily childless individuals maintain their decision in the face of objections to their lifestyle choice? The voluntarily childless tend to be somewhat more autonomous and, even though they are aware of the various social sanctions, they are somewhat unconcerned about them (Houseknecht, 1977). In addition, a number of different approaches are used by the voluntarily childless to protect themselves from the pronatalist pressure of society.

The first of these approaches is the selective perception of the consequences of parenthood (Campbell, 1983; Veevers, 1975, 1980). The childless woman or couple, who already think of childbearing and child-raising in negative terms, can easily maintain and

strengthen this view by paying attention to only the negative components of parenthood and ignoring any contradictory, positive data. They will notice the child who is throwing a temper tantrum in a store, for example, and selectively ignore the children that are having fun. They may speak disparagingly of parental roles, pregnancy or childbirth and therefore reinforce their own decision not to fall into those roles. Those who are motivated to avoid the penalties or costs of parenthood can usually trace the decision back to childhood or adolescence (Campbell, 1983) which sounds very similar to early articulators.

Second, protecting the rewards of childlessness (Campbell, 1983; Veevers, 1980) is another way of defending the childless lifestyle. Magnifying the economic benefits of remaining childless is one such tactic. Those who are motivated to protect the rewards of a childless lifestyle sound very similar to the postponers, in that they decide to remain childless after experiencing a childless lifestyle for a few years. To use economic arguments such as 'when we buy a house' which becomes 'when the house is paid off' is a classic pattern of postponers (Veevers, 1980).

Third, reference group support (Houseknecht, 1977; Veevers, 1975, 1980) can be obtained through differential association with like-minded people. This idea of differential association describes the tendency of childless women or couples to drift away from the friends of their youth who have children and instead find new friends. These new friends are either childless themselves, or actively support the choice to remain childless. In some cases, the reference group may consist of only the woman's partner.

Fourth, for many childless individuals there is a strong tendency to reinterpret disapproval of childlessness as envy of the childless lifestyle (Morell, 1994; Veevers, 1980). This strategy is bolstered by anecdotal reports of families that regret having children. The famous Ann Landers poll in which 70% of the people that wrote in said that they wish they had not had children is the type of information kept on hand as a defense by the voluntarily childless.

Even though the voluntarily childless use economic arguments such as wanting to have enough money to travel, in reality, there is not much difference in the lifestyle of the voluntarily childless and parents who are matched on socio-economic status (Ramu, 1985). The childless may say they want to travel, but both the voluntarily childless and the parents in Ramu's (1985) study had settled into similar lifestyle patterns.

Comparative Studies

Most of the comparative studies focused on identifying differences between voluntarily childless women and those women who wish to be, or are, mothers. Much of this research involved samples of young, single, as yet childless, university undergraduates where the mean age is often under 23 years (Callan, 1983, 1986; Gerson, 1980; Jamison, et al., 1979; Peterson, 1980). Other comparative studies employed samples of the voluntary childless and parents (Bram, 1985; Callan, 1983; Houseknecht, 1979a; Krishnan, 1989; Pol, 1983). Most of these studies involve women (Callan, 1983, 1986; Gerson, 1980, 1983; Houseknecht, 1979a; Krishnan, 1989; Pol, 1983), and only a few

include men (Bram, 1985; Callan, 1983; Jamison, Franzini & Kaplan, 1979; Peterson, 1980).

On average, the voluntarily childless woman was described as better educated, less religious, more involved in the labor force, and earning a higher wage than mothers (Pol, 1983; Houseknecht, 1979a; Krishan, 1989). Young women who intended to remain childless wanted well educated, less traditionally sex-typed partners, more social and financial independence, and expected to pursue careers (Callan, 1983, 1986). Conversely, Gerson (1980, 1983) found that positive memories of early mothering and nurturing, traditional feminine sex roles, and anti-feminist sympathies characterized those subjects who expressed a wish to become mothers. Women who intended to have children were more interested in partners who had a strong degree of commitment and desired mutual trust and disclosure in the relationship (Callan, 1983, 1986).

Houseknecht (1979a) compared women who had been married five years and were committed to childlessness with married mothers of young children, also married for five years. The groups were matched for level of education, labor force participation, and religious affiliation. The marriages of the voluntarily childless were higher in overall adjustment and cohesiveness and rated higher in marital satisfaction. Also, more outside interests were held in common with the spouse; there was more frequent exchange of stimulating ideas; a stronger determination to continue the marriage; higher degrees of happiness in the marriage (as compared to other relationships); and more agreement on chores, leisure time interests and activities, and career decisions.

In another study, women who were voluntarily childless through postponement were compared with parents on attitudes toward children and parenthood (Ramu & Tavuchis, 1986). Parental couples saw the benefits of children as mostly affective; they were sources of pleasure, happiness and relaxation and they assured the continuity of the family name. The voluntarily childless stressed the drawbacks. Children were: an obstacle to a couple-centered relationship; economically costly; an impediment to educational and occupational success and the attendant self-actualization that one may attain through these pursuits; and they curtailed many freedoms.

In another study comparing intentional mothers with voluntarily childless women, the childless were less dissatisfied with their early childhood, especially with their relationships with their fathers and mothers (Reading & Ametee, 1986). Burman and de Anda (1985), in a study comparing voluntarily childless couples with intentional parents, found the voluntarily childless reported more satisfactory marital relationships than intentional parents. They also found that there was no evidence the voluntarily childless were reacting to unpleasant childhood memories by choosing not to have children. The personality characteristics of the voluntarily childless included higher self esteem and lower conformity when compared to the intentional parents, and an equal degree of empathy.

Feldman (1981) looked in detail at the backgrounds of his intentional parental and voluntarily childless participants. Few differences were identified. There were no differences in family of origin, parental marital satisfaction, dominance of the mother in

childrearing and closeness to mother. He also found no difference between the two groups in the value that the mother or father placed on masculine or feminine attributes. Nonetheless, the voluntarily childless valued more highly the masculine traits, especially assertiveness, without valuing the feminine traits any less. The voluntarily childless also tended to be less sexist and less traditional. There were no differences in marital satisfaction.

In a study that compared voluntarily childless women with voluntary mothers (Jeffries, 1994), 12 women in their 30's and 40's were interviewed about how they made the decision to have or not have children and whether they were happy with their decision. Both the voluntarily childless women and the intentional mothers had chosen whether they would remain childless or have children based on what they described as voluntary decisions. The voluntarily childless and the intentional mothers both indicated that they had chosen the role that seemed right and natural for them. Three differences emerged between the two groups of women. The first was that all of the voluntarily childless women had seriously considered, at one time or another, the alternative of having children, whereas only one mother had seriously considered the alternative of not having children. The second difference was that the voluntarily childless viewed career or children as a mutually exclusive dichotomous choice, whereas the mothers did not see a dichotomous choice -- motherhood is a necessary part of life, and a career can easily be added. The third difference was that the voluntarily childless were prepared for the interview questions because of frequent practice; the mothers were not prepared, as their reasons for having

children were not normally questioned. Notwithstanding these differences, each woman, was basically happy with her decision, whether it be to have or not have children.

While Houseknecht (1979b) found that achievement motivation and autonomy characterized voluntarily childless women, both early articulators and postponers, some of these characteristics may change over the years. In her longitudinal study, Bram (1985) found that a sample of voluntarily childless women in their mid-twenties at the start of her study were more likely to describe themselves as independent, dominant, occupationally competitive, and achievement oriented than similarly aged women who intended to become, or were, mothers. Seven years later, however, the voluntarily childless rated themselves more similarly to the other women on dominance, occupational competitiveness and achievement orientation; group differences on ratings of independence remained. In other words, on these measures it appears the voluntarily childless were becoming less different from the women who intended to become or were mothers as time progressed.

To briefly reiterate, the voluntarily childless can be split into two groups based on when and how they decided to remain childless. Early articulators decide early in life, before marriage, that they do not wish to have children, and that decision tends to remain stable over time. Postponers are women who make the decision to forgo having children later in life, usually after some years of ambivalent feelings about childbearing and after discussions with their husbands. Also, the voluntarily childless, as a whole, have been found to use various tactics to defend their lifestyle from the pressure to conform to

society's prescription to have children. Primarily these are association with other childless individuals and negative appraisals of children and parenting roles. Also, the voluntarily childless tended to be better educated, less religious, more independent and achievement oriented, more likely to work and earn a higher wage, have higher self-esteem, and demonstrate a lower degree of conformity, when compared to parents.

Involuntary Childlessness

There is no commensurate body of literature on involuntary childlessness. The literature that does exist focused almost exclusively on women and couples who sought medical treatment for infertility. Of 170 references from 1973 to 1996, 120 indicated that the samples were drawn from women or couples seeking, or already undergoing, infertility interventions, and a further 49 focused on "infertile" couples or actual infertility treatments. Only one reference (Bierkens, 1975) selected participants from the general population of childless individuals, rather than from those who had already been medically diagnosed as infertile. There is basically no literature that examines the involuntarily childless woman unless she seeks help for infertility.

As indicated, there appears to be only one dated study that examined what percentage of childless couples seek medical treatment for infertility (Bierkens, 1975). Of the 155 couples sampled from the population of childless couples of fertile age in the Netherlands, 50% had never sought any medical intervention. Of this group, 36% saw their childlessness as a significant problem, 46% were not concerned, 8% stated they were voluntarily childless, and the remaining 10% said they had never had intercourse.

Most of the psychological literature on infertility explored the adjustment of the woman, or couple, to the fact of their infertility, the ways in which they coped, and the social resources upon which they drew. For example, some of this literature focused on the individual's self esteem and psychological well-being (e.g., Abbey, Andrews & Halman, 1992). Unfortunately, as much of this research focused on women and couples who were primarily recruited from infertility specialists, they were likely still undergoing fertility interventions. Therefore, these individuals probably still hoped that they would eventually conceive -- they were not yet dealing with being permanently childless. As indicated, there appear to be no studies on women who are involuntarily childless who do not seek medical diagnoses or infertility treatment, and only a few studies on post-menopausal involuntarily childless women (Alexander et al., 1992; Beckman & Houser, 1982). Hence there is no indication as to how these women might be similar or different from women who do seek treatment. Also, as high technology infertility treatment is a relatively new development, it is not clear how much of the research on these samples of women can be extended to older cohorts who did not have these fertility interventions open to them. There is evidence, however, from studies of social isolation / participation and general psychological well-being on the childless elderly that overall they are not adversely affected by their childless state, though they may experience regret.

Childless Older Women

It is difficult to extend the body of research on voluntary childlessness into the population of women who are peri-menopausal (near or in menopause) and post-

menopausal. Few studies of mature and elderly women have separated childless women into groups based on whether they are voluntarily or involuntarily childless (Beckman & Houser, 1982). Therefore, there is little information to elucidate how much of the research findings on younger women are cohort specific and how many of these findings can be generalized to voluntarily childless women of any age.

In a theory and position paper in 1984, Myers and Navin identify childless older women as a population "at risk". Since childless women often have problems "similar to and often more severe than other older persons, they have fewer resources and familial supports to help them cope" (p. 98). Myers and Navin also speak of the social isolation of the childless elderly woman as she is without confidants. While this paints a rather bleak outlook for the older childless woman, fortunately there is a substantial literature that examines whether or not the elderly childless woman is adversely affected in her social contacts or her life satisfaction and well-being.

Social interaction, assistance, and emotional support

Are childless older women alone and isolated in their later years? Are they without confidants? While there is a large literature that examines this question, a representative sample of primarily large scale population studies will be discussed here. A number of these studies have specifically addressed the question of social support and resources for elderly childless individuals.

Social support has been defined in a number of ways in the literature which makes direct comparisons of studies difficult. One such definition has been to use measures of

social interaction (Bachrach, 1980; Connidis & McMullin, 1992). The more an individual interacts and participates socially, the more likely the person will be able to draw on others for support. A second method of defining social support has been to use measures of instrumental support (Keith, 1983b), the ability of the individual to draw on others for assistance with various tasks or chores. And third, social support has been defined by measures of emotional support and relationships (Connidis & Davies, 1990, 1992; Rubinstein, Alexander, Goodman, & Luborsky, 1991).

Bachrach (1980) drew her data on social isolation from an American national probability sample of 2,797 men and women aged 65 and over ("The Myth and Reality of Aging in America", Harris and Associates, 1974), 16.7% of whom were childless. Childlessness was defined as having no living children, regardless of whether the respondent had ever had children, therefore voluntary or involuntary childlessness could not be distinguished. Social isolation was defined as (a) having no face to face contact with family, neighbors or friends over the previous two days, and (b) whether the respondent lived alone. Childless elderly respondents were more likely to live alone and, if they lived alone, were more likely not to have had social contact with family, friends or neighbors within the previous 2 days. Twenty-five percent of the childless respondents reported no social contact in the previous 2 days compared with 10% of the parental group. The socially isolated childless elderly tended to suffer from poor health or come from manual labor occupations. For those childless individuals who suffered from few health problems or came from non-manual occupations, there were no differences in social

isolation between the childless and parents, primarily because the childless reported more non-kin contact with neighbors and friends.

In a study of social participation, Connidis and McMullin (1992) drew their sample from the 1985 Canadian General Social Survey conducted by Statistics Canada (1986). The resultant sample consisted of 4,258 respondents 55 years old and over, 15% of whom were childless. Childlessness was defined in the same manner as Bachrach (1980). Social participation was measured as the frequency of participating in three activities over the previous month -- going to public places (e.g., movies, theater, restaurant, sporting event), traveling (outside of own town) and going on outings (e.g., bingo, playing cards, taking a course). Connidis and McMullin were also interested in who provided support as a companion for these activities. This study found that going to public places and traveling did not differ between the childless and parents, while the childless went on outings significantly more often. Gender and marital status were more frequent predictors of social participation than was parental status. Men went to public places and traveled more than women, who went on more outings. Married persons traveled most often, widows went to more public places, and the widowed and divorced went on more outings than the married. The childless were also more likely to go to public places with friends and to travel with friends and other relatives than were parents. Health and age for the entire sample were significantly inversely related to traveling and going to public places, while education was positively related to both. Age, health and education were not significantly related to the frequency of going on outings.

Patterns of assistance, or instrumental support, have also been studied in the childless old-old. In a study of 551 parents and childless men and women aged 72 to 97 years (mean age = 79), of which 19% were childless, Keith (1983b) found that the childless were not adversely affected in receiving help in old age or on measures of life-satisfaction. Responses were solicited as to whether help was received on the following tasks and who provided it: laundry, correspondence or paying bills, running errands, yard work, shopping, meals, other housework, getting financial advice, assistance in making decisions, and whether anyone held power of attorney. While children provided most assistance to parents, the childless were able to receive help from more distant relations, often siblings, and friends. One area in which parents did receive substantially more assistance than the childless was in the area of soliciting advice, which was primarily provided by children. Marital status was significantly related to requiring assistance. The married were far more likely to perform these tasks themselves, whether childless or not, while the widowed were more likely to need assistance from others. Health and income measures were not discussed in relation to the patterns of assistance received.

A slightly separate literature examined the relationships of the childless elderly (Connidis & Davies, 1990, 1992; Rubinstein et al., 1991). For elderly parents children are the primary source of confidant relationships (Connidis & Davies, 1990, 1992), but who serves in this capacity for the childless? These studies examined who the childless elder individuals relied on for companionship and a confidant relationship; health and income measures, while collected, were not discussed in these studies.

Connidis and Davies, in a related pair of studies (1990, 1992), examined the companion and confidant networks of a stratified random sample of 400 men and women, aged 65 and over, 15.8% of whom were childless. They examined both the composition of these networks (1990) and who was most likely to fill the role of confidant or companion (1992). A confidant was defined as a “person who you can trust and confide in”, and a companion was defined as “your companion when you do things outside your home” (1990, p. S143). Responses were coded as spouse, child, sibling, other relative and friend. Multiple codings were permitted over and within code types -- for example, if a respondent mentioned a sister, daughter and son as confidants then one sibling and two children would be coded. Parents reported that children took first place as confidants, while spouses and friends were important as companions. Childless men and women develop confidant networks with spouses (if married) and friends, and companion networks with friends and siblings. For single or previously married childless women, siblings served as both companions and confidants to a greater extent than in any other group, whereas single childless men appeared to rely more on other relatives and siblings.

In a descriptive study, Rubinstein et al. (1991) examined the key relationships of 31 never married, childless older women, age 60 and over. Twenty-two women out of their sample of 31 filled the role of “co-resident daughter” -- living with, and caring for, one or both parents until their death(s). Eighteen women described key relationships with siblings, nieces and nephews. Eleven women described key relationships with “adopted” non-kin families, and six described parent-like relationships with “adopted” unrelated

children. Eight women described same-generation, same-gender companionate relationships as key in their lives, and 29 women described friendships, primarily with other women, as highly important to their lives.

Thus, the childless older person, if in good health, was no more likely to be socially isolated than age peers who were parents. Parents rely primarily of children as confidants, however, childless individuals have close relationships with spouses (if married), friends, siblings, and other relatives.

Psychological well-being and life satisfaction

A number of studies have examined the constructs of psychological well-being (Beckman & Houser, 1982; Connidis & McMullin, 1993) and life satisfaction (Rice, 1989), and whether childless elder women are adversely affected when compared to mothers. Marital status has also been examined in some studies. In the main, the research indicates that there are no large differences in well-being or life satisfaction scores between childless elder women and mothers.

Beckman and Houser (1982) compared married mothers and childless women with mothers and childless women widowed from 1 to 5 years (they comment that “a few” of their childless participants had children who were no longer living). Their sample of 719 women ranged in age from 60 to 75 years of age. Beckman and Houser found that the childless widows’ well-being was more adversely affected than widowed mothers, however the magnitude of the effect was small, accounting for only 1% of the variance.

Both groups of widows scored lower on well-being than the married groups and there were no differences on well-being between married mothers and married childless women.

Beckman and Houser (1982) also examined differences in well-being based on whether the childless women were voluntarily or involuntarily childless. They found no significant differences and comment that well-being is more likely related to current satisfaction with childlessness rather than the voluntariness of the situation 30 to 40 years previously. They hypothesize that women who were originally dissatisfied had likely come to terms with their childless state over the intervening years.

In a related study with the same subjects as Beckman and Houser (1982), Houser, Berkman and Beckman (1984) examined the advantages and disadvantages of the childless state from the perspective of the widowed and married childless participants and mothers. They found that the childless women did not conform to the "classic unhappy, unsatisfied stereotype" (p. 398), but rather perceived advantages in their life "state", as did the mothers. These advantages were described as having "less responsibility, worry, and stress", more "personal freedom / privacy", and "monetary" benefits (p. 397).

Rice (1989) compared measures of life satisfaction between 30 childless never-married and 30 childless widowed women over the age of 65. She found that widowed childless women experienced lowered life satisfaction compared to the never-married childless women. Unfortunately, Rice did not have a married comparison group to ascertain whether the never-married women were as satisfied as married women or not.

Keith (1983a) examined a sample of 103 childless and 448 parental men and women between the ages of 72 and 97, and concluded that the presence or absence of children did not seem to appreciably affect the lives of the old. As well, Rempel (1985) utilized the 1979 Social Change in Canada survey to examine differences in life satisfaction between the childless and parental elderly men and women. Of a total of 338 elderly (mean age = 72.3), 16% were childless. She found that the childless elderly had levels of well-being that matched and sometimes exceeded those of elderly parents, and that both groups were very satisfied with life and friendships.

Connidis and McMullin (1993) examined similarities and differences in avowed happiness, depression, and satisfaction with life between groups of parents with close ties to their children, parents with distant ties to their children, voluntarily childless and involuntarily childless men and women over the age of 55 ($N = 678$). Levels of well-being from lowest to highest were as follows: (1) the lowest ratings of avowed happiness and satisfaction with life, combined with the highest depression scores, were experienced by the involuntarily childless, (2) parents who had distant ties to their children were less happy and satisfied than the parents who had close ties to their children, and (3) the voluntarily childless and parents with close ties to their children were the most satisfied, had the highest rating of avowed happiness and lowest ratings of depression. There were no significant differences between the voluntarily childless and parents with close ties to their children on any measures. Connidis and McMullin also found no significant

differences on measures of well-being between the widowed, single, or married participants.

In summary, it would appear overall that the majority of studies indicate that the childless are not adversely affected on measures of well-being and life satisfaction. However, there are some mixed results. Beckman and Houser (1982) found no differences in well-being between voluntarily childless women and involuntarily childless women, whereas Connidis and McMullin (1993) did. It is not clear why this discrepancy exists within the literature.

An important methodological consideration is that all of these studies utilized global measures of psychological well-being. These may not be specific or sensitive enough to ascertain if there are unresolved issues around the childless state of these women. There is, however, an alternative method with which to measure possible unresolved issues around childlessness -- the assessment of the presence or absence of regrets around childlessness. It is entirely conceivable that individuals with relatively high psychological well-being may experience some regret.

Lecci, Okun & Karoly (1994) described unfulfilled or unattained intentions or goals that naturally accumulate in a person's life, and the associated "hot" cognitions, as "regrets". Do childless older women regret not having had children? In a study of 60 mid-life never-married, divorced and widowed women, aged 35 to 65 years of age, Loewenstein et al. (1981) found that the majority of women (85%) were highly satisfied or reasonably content with their lives; they mention no group or age differences. They did

find, however, 13 of the 40 childless women in their sample regretted the absence of children. These regrets were intense for some of these women. Unfortunately, Loewenstein et al. did not report how many women experienced intense regret nor whether these women were voluntarily or involuntarily childless.

As mentioned earlier, the single study that has directly addressed regrets around childlessness in old age confounded voluntarily and involuntarily childless women (Alexander et al., 1992). Of their sample of 90 childless older women, Alexander et al. reported specific reasons for childlessness for 60 women. Of these 60 women, only 7 said that they did not want children: i.e., were voluntarily childless. The remaining 53 participants could not have children for a variety of reasons; i.e., they were involuntarily childless. As mentioned previously, the reasons for not having children were cited as: (a) husband did not want children, (b) unable to conceive or carry pregnancy to term, (c) past childbearing age at marriage, (d) other health reasons, and (e) widowed early in marriage. The final 30 women in the sample were single; their reasons for not having children were listed as due to marital status. It is not clear whether these single women considered themselves voluntarily or involuntarily childless -- did they remain childless because they did not marry, or did they not marry partly due to not wanting children? Alexander et al. then reported that childless older women regret not having children. Unfortunately, as they did not discriminate whether or not the 7 voluntarily childless women in their study had regrets, the reader is unclear as to whether the experience of regret can be generalized

to all childless elder women or if it is an artifact of a primarily involuntarily childless sample of women.

As the constructs of psychological well-being and regret are both important to the present study, they will be examined in more detail. It is important to discuss measurement issues for both of these constructs before addressing the manner in which this study examines both psychological well-being and regret in a sample of mature and elder voluntarily and involuntarily childless women and mothers.

Measurement Issues

Psychological well-being

Diener (1984) reviewed many of the instruments available to assess psychological well-being and their shortcomings from primarily a reliability and validity standpoint. He concluded that single-item scales are adequate if a very brief measure of global well-being is needed, but that since subjective well-being is a multi-component construct, multi-item scales are better. Social desirability did not appear to be a problem in the subjective well-being literature, and the multi-item subjective well-being instruments are sufficiently temporally reliable and stable to be relatively unaffected by the individual's mood when completing the instrument (Diener, 1984; Seidlitz & Diener, 1993).

The main measures of subjective well-being reviewed by Diener (1984) consisted of measures of positive and negative affect, and "life satisfaction". Bradburn's (1969) scale to measure emotional well-being or happiness, defined as the balance between positive affect and negative affect, and the Life Satisfaction Index (LSI; Neugarten et al.,

1961), a measure of well-being designed for geriatric populations, are two examples. While Diener discussed the reliability of these instruments, and their convergent validity, Ryff (1989a, 1989b, 1989c) took exception with the theoretical underpinnings for the existing instruments that measure well-being.

Ryff (1989b, 1989c), in brief reviews of many of the same measures as Diener (1984), discussed the shortcomings in the theoretical development of these instruments. She made the point that most of the instruments presently used to measure psychological well-being were not developed from a theory driven standpoint, and that many take a negative view of aging. For example, two of the more negative items from the LSI are: "this is the dreariest time of my life", and "when I look back over my life, I didn't get most of the important things I wanted". The early models focused more on decline than they did on growth and development. Ryff commented that the main purpose of Bradburn's (1969) study was not specifically to define the underpinnings of psychological well-being. He was conducting a study of social change, and his finding that positive and negative affect were independent "appeared to be a serendipitous finding of a study conceived for other purposes" (Ryff, 1989a, p. 1070). She also observed that many measures of life satisfaction were primarily designed with other purposes in mind as well. The LSI, for example, was designed to differentiate between those people who were aging successfully and those who weren't. It was not designed as a measure the components of successful aging per say.

Ryff has developed an instrument to measure psychological well-being that is based on many of the theories of healthy adult development:

... such perspectives as Maslow's (1968) conception of self-actualization, Roger's (1961) view of the fully functioning person, Jung's (1933, Von Franz, 1964) formulation of individuation, and Allport's (1961) conception of maturity ... life span developmental perspectives ... [such as] Erikson's (1959) psychosocial stage model, Buhler's basic life tendencies that work toward the fulfillment of life (Buhler, 1935; Buhler & Massarik, 1968), ... Neugarten's (1968, 1973) descriptions of personality change in adulthood and old age ... [and] Jahoda's (1958) positive criteria of mental health. (Ryff, 1989, p. 1070, contents of square brackets added for clarity).

She also examined how middle aged and older adults view psychological well-being (1989a), and combined this research with the common points from the different theories listed above. Ryff then constructed a parsimonious summary that examined both the components of psychological well-being (1989a) and successful aging (1989b), isolating six dimensions that tapped the various aspects of psychological well-being and successful aging developed in these theories. She then operationalized these dimensions, and developed a self report measure (1989b). A description of the six dimensions and the attributes demonstrated by high and low scores on each dimension are summarized in Table 1. The corresponding Measure of Psychological Well-being -- Short Forms (Ryff, personal communication, 1995) is presented in Appendix A.

Ryff (1989b) provided the psychometric properties of her 120 item instrument which was developed and normed on a sample of 321 men and women divided between young ($n = 133$, $M = 19.53$, $SD = 1.57$), middle-aged ($n = 108$, $M = 49.85$, $SD = 9.35$) and older ($n = 80$, $M = 74.96$, $SD = 7.11$) adults. Correlations of all six dimensions with measures of the LSI (Neugarten et al., 1961), the Affect Balance Scale (Bradburn, 1969), and the Self-Esteem Scale (Rosenberg, 1965) were all positive and significant ($p < .001$), ranging from .25 to .73. Correlations with measures of negative functioning, the Revised Philadelphia Geriatric Morale Scale (Lawton, 1972), Levenson's (1974) locus of control subscales, and Zung's (1965) Depression Scale, were all negative and significant ($p < .001$), ranging from -.30 to -.60. Internal consistency for the scales ranged from .86 to .93; 6 week test-retest reliability ranged from .81 to .88. A factor analysis of Ryff's six dimensions, plus the dimensions measured by the instruments mentioned, was also performed. The analysis indicated that a three factor solution was optimal (principal components analysis, varimax). The first factor, termed well-being, accounted for 51.1% of the variance. It incorporated most of the prior measures of well-being (life satisfaction, affect-balance, morale, self-esteem, depression, and Levenson's internal locus of control) as well as the new dimensions of self-acceptance and environmental mastery. A second factor, accounting for 8.5% of the variance, incorporated the new dimensions of personal growth, purpose in life, and positive relations with others. The third dimension, accounting for 7.3% of the variance, combined the new dimension of autonomy with Levenson's (1974) locus of control dimensions of powerful others and chance. Oblique

Table 1

Definitions of Dimensions of Psychological Well-Being

Dimension	Score	Description
Self-Acceptance	High	Possesses a positive attitude toward the self; acknowledges and accepts multiple aspects of self, including good and bad qualities; feels positive about past life.
	Low	Feels dissatisfied with self; is disappointed with what has occurred in past life; is troubled about certain personal qualities; wishes to be different from what one is.
Positive relations with others	High	Has warm, satisfying, trusting relationships with others; is concerned about the welfare of others; is capable of strong empathy, affection, and intimacy; understands the give and take of human relationships.
	Low	Has few close, trusting relationships with others; finds it difficult to be warm, open, and concerned about others; is isolated and frustrated in interpersonal relationships; is not willing to make compromises to sustain important ties with others.
Autonomy	High	Is self-determining and independent; is able to resist social pressure to think and act in certain ways; regulates behavior from within; evaluates self by personal standards.
	Low	Is concerned about the expectations and evaluations of others; relies on judgments of others to make important decisions; conforms to social pressures to think and act in certain ways.
Environmental Mastery	High	Has a sense of mastery and competence in managing the environment; controls a complex array of external activities; makes effective use of surrounding opportunities; is able to choose or create contexts suitable to personal needs and values.
	Low	Has difficulty managing everyday affairs; feels unable to change or improve surrounding context; is unaware of surrounding opportunities; lacks sense of control over external world.

Table 1. (continued)

Purpose in Life	High	Has goals in life and a sense of directedness; feels there is meaning to present and past life; holds beliefs that give life purpose; has aims and objectives for living.
	Low	Lacks a sense of meaning in life; has few goals or aims, lacks a sense of direction; does not see purpose of past life; has no outlook or beliefs that give life meaning.
Personal Growth	High	Has a feeling of continues development; sees self as growing and expanding; is open to new experiences; has sense of realizing his or her potential; sees improvement in self and behavior over time; is changing in ways that reflect more self-knowledge and effectiveness.
	Low	Has a sense of personal stagnation; lacks sense of improvement or expansion over time; feels bored and uninterested with life; feels unable to develop new attitudes or behaviors.

Note. Table 1 taken directly from Ryff, 1989b, p. 288.

rotations also gave a three factor solution. These numbers are all based on the original full length scales that consisted of 20 items for each of the 6 dimensions of well-being.

Unfortunately, as this is a fairly new measure, there appear to be no reviews of Ryff's measure by other researchers. According to Ryff's own literature, she appears to have developed a theoretically and psychometrically sound instrument that seems to avoid the pitfalls and shortcomings of previous instruments; a measure that recognizes the multi-dimensional nature of well-being. In addition, she provides normative data on young, middle-aged and older men and women (see Table 5, in results section, for normative data

on middle-aged and older women). The measure is also face valid, and though lengthy, is not difficult for women up into their 80's to complete.

Possible selves

Another approach that could be applied to the study of psychological well-being, in relation to aging and to childlessness, is that of possible selves (Cross & Markus, 1991; Hooker, 1992; Markus & Nurius, 1986; Ryff, 1991). "Possible selves are conceptualized as psychological resources that are instrumental in motivating and defending the self in the course of adult development" (Cross & Markus, 1991, p. 230). Whereas most studies of subjective well-being tend to focus on present evaluations of well-being (Beckman & Houser, 1982; Connidis & McMullin, 1993; Rice, 1989), Ryff (1991) has examined how psychological well-being is evaluated across the life span by asking participants to rate their psychological well-being in the past and what they think it will be in the future. "Positive mental health thus includes not only the sense that one is functioning well in the present but also the sense that one has held steady or improved relative to the past and that similar well-being is anticipated in the future" (Ryff, 1991, p. 286). In this manner, important information can be gained about whether an individual sees themselves getting better or worse over time. Hooker (1992) asked participants about their most important hoped-for possible self and their most important feared possible self. Thus perceptions of one's current well-being, as well as, what one hopes for or fears, perceptions of improvement, maintenance and decline, all constitute aspects of psychological well-being.

Not only can temporal judgments of psychological well-being and associated

improvement or decline be made, but judgments can also be made as to how close one is to one's "ideal" self. Discrepancies between one's perception of one's "actual" self and one's "ideal" self are associated with dejection related emotions, such as disappointment, dissatisfaction and sadness (Higgins, 1987). It is entirely possible that regret would also fit as a "dejection" related emotion.

Research on elder adults has also indicated, commensurate with theory (Birren & Renner, 1980), that actual-ideal discrepancies diminish with age (Ryff, 1991). The tendency of actual and ideal selves to merge or become more "congruent" in older persons is theorized to help maintain psychological well-being in later life (Higgins, 1987).

Present and ideal Possible selves have not been examined in the context of similarities or differences between women who followed the normal path of desiring and having children, women who remained childless by choice, or women who could not have children. The construct of possible selves fits in nicely with the exploration of psychological well-being and possible regrets in a population of aging childless women.

Regret

Studies of the reminiscences of the elderly and their regrets have been performed in part to see if there is some resolution in old age. Some have suggested that if this life review is successful, there is a sense of congruence between what was hoped for and what was achieved. This congruence may lead to successful aging and higher levels of life satisfaction (Alexander et al., 1992; Degenova, 1992, 1993; Fry, 1991; Gilovich &

Medvec, 1994, 1995; Kinnier & Metha, 1989; Kovach, 1991; Lecci et al., 1994; Metha, Kinnier, & McWhirter, 1989).

There is not a well developed literature on the assessment of regret when compared to the assessment of life satisfaction and psychological well-being. In most cases researchers have either requested that participants: (1) endorse which regrets they experience or things they would like to do differently from a provided selection (Degenova, 1992, 1993; Kinnier & Metha, 1989; Metha et al., 1989), (2) describe their regrets in an interview format (Alexander et al., 1992; Carlson, 1984; Gilovich & Medvec, 1994, 1995; Loewenstein et al., 1981), or (3) make their own list of salient regrets (Lecci et al., 1994). All of these studies, with the exception of Alexander et al. (1992) and Loewenstein et al. (1981), were general inquiries into what people have regretted in their lives and what they would like to do differently.

Overall this general regret literature indicates the following patterns of most frequently cited regrets. Kinnier & Metha (1989) and Metha et al. (1989) in a sample of 138 men and 178 women, divided into early (ages 20 to 29), middle (35 to 55), and late (64 or older) adulthood, found loss of educational opportunity was the most frequently cited regret mentioned by their respondents (39%), followed by “been more assertive” (25%), “learned to be more self disciplined” (17%), “taken more risks” (17%) and “devoted more time to my spiritual life” (15%) (Kinnier & Metha, 1989, p. 187 - 188). Rank ordering of these regret categories was the same across age groups and gender.

DeGenova (1992) found that items pertaining to spending more time in family activities, financial preparation for the future, career development, developing one's mind or intellect, pursuing education, traveling, doing what one enjoys, exercising, and taking care of one's body were endorsed by over 50% of a sample of elderly retired men and women. The most frequently endorsed item was that of pursuing education, which was endorsed by 71.1% of their participants. Similarly, Lecci et al. (1994) found in a sample of college students (mean age 28.5 years) that pursuing education was the most frequently cited regret (31%), followed by regrets about current or past jobs (17.4%) and participation or failure to participate in leisure activities (16.7%).

Gilovich and Medvec (1994, 1995) examined whether it was actions that people had performed, or actions that they had failed to perform, that were more likely to be viewed with regret. They examined responses from a total of 303 participants from mixed age samples over five studies ranging from university undergraduates to nursing home residents. In the short term regrets of action (e.g., I shouldn't have married so early) tended to be more salient, whereas in the long term regrets of inaction (e.g., I should have finished my education) tended to be endorsed more frequently (1994). They also found (1995) that failures to act that result in regret outnumbered regrettable actions by nearly 2 to 1 (63% versus 37%). Forty one percent of the regrets of inaction were education related, and 16% were related to inaction around occupational issues. In addition, a sense of personal responsibility appeared to be key to the experience of regret. Bad luck might be lamented but not regretted.

DeGenova (1993) found that life revision (the desire to change certain past thoughts, feelings, actions, or accomplishments) and regret (unhappiness with one's past thoughts, feeling, actions, or accomplishments) were significant predictors of life satisfaction, as measured by the LSI, in a sample of 122 men and women 54 to 91 years of age ($M = 72.1$). Health and social activity were also important as predictors, accounting for more variance than life revision or regret. Controlling for health and social activity, those seniors in her study that wished to change the most about their lives, or who mentioned the most regrets, had the lowest life satisfactions scores.

Lecci et al. (1994) also found regret was inversely related to psychological well-being and positively related to negative affect. They commented that "a pronounced negative cognitive focus on regrets is maladaptive for ... psychological well-being" (p. 738). In addition, Carlson (1984) in a detailed assessment of ego-integrity in eight community living seniors, found that those seniors whose interviews were full of regret did not demonstrate ego-integrity. Therefore, it appears that regret and well-being are separate constructs, and the experience of increased regret adversely affects both psychological well-being and the ability to achieve congruence, or a sense of ego-integrity, in old age.

The two studies that assessed regret in childless mid-life and older women (Alexander et al., 1992; Loewenstein et al., 1981) have already been discussed. Here it is sufficient to repeat that little in the way of data was given as to how many voluntarily or

involuntarily childless women experienced regrets around childlessness. It is difficult, therefore to assess this problem from the existing literature.

The Present Study

There are a number of deficits in the literature on childless older women. First, there is a small body of literature in general which needs to be added to as older women are one of the fastest growing segments of our population. Second, there is little research to date on what type of regrets are experienced by voluntarily childless and involuntarily childless women, and little mention of whether these change with age. Granted, Alexander et al. (1992) suggested that older childless women in general regret not having children and that these regrets were increasing with age, but they primarily report findings on involuntarily childless women. Their study does not address the questions: Do voluntarily childless women regret not having children? Is there a difference between voluntarily childless and involuntarily childless women in the presence of regrets about not having children? Do these regrets increase with age for both voluntarily and involuntarily childless women? These questions need to be examined to find out if elder voluntarily childless women and involuntarily childless women reach some point of congruence with their experience of life without children. Third, while there is a literature on the psychological well-being of elder childless women, including voluntarily and involuntarily childless elder women, there have not yet been any direct examinations of the changes in psychological well-being between middle adulthood and the senior years in a sample of childless women across the dimensions that Ryff (1991) describes.

This study was designed to ascertain if women who are just past their childbearing years and who are into their senior years, who are voluntarily or involuntarily childless, regret not having had children earlier in their lives and whether not having children affects their perceptions of their present and ideal possible selves and psychological well-being. The cross-sectional nature of the design may assist in determining if there are age differences in these measures as women leave their childbearing years behind and negotiate middle and late life. Specifically, will the older women demonstrate that regrets are decreasing with age, resulting in an increased sense of congruence when compared to the middle-aged women? The comparison group that was utilized was that of women who have followed the “normal” adult life course -- women who desired to have children and did so.

Research Questions and Rationale

The questions this research addressed are: Do voluntarily childless elder women regret the decision made earlier in life to not have children, and does that decision affect their psychological well-being? Do women who have just left their fertile years behind regret the decision to remain childless more or less than older women? Is there a difference in the dimensions of psychological well-being and regrets expressed by women who are involuntarily childless, voluntarily childless, or intentional mothers across the age span of middle to late adulthood?

Therefore the present study was designed with the following hypotheses in mind. Group differences in the measures of psychological well-being and possible selves were

hypothesized between the voluntarily childless women and involuntarily childless women. These were based on the logic that the involuntarily childless woman had not been able to take the course in life that she wanted to. Therefore, the involuntarily childless woman would likely score lower on measures of self-acceptance, environmental mastery and purpose in life, and have a larger discrepancy between the way she rated her present self and the way she would ideally like to be. As well, Bram (1985) and Houseknecht (1977, 1989b) described the young voluntarily childless woman as more autonomous and independent than mothers. In addition, the voluntarily childless young woman devotes more time to personal growth (Veevers, 1980). It was anticipated that these results should transfer to mid-life and older women as well, with the voluntarily childless women scoring significantly higher on the dimensions of autonomy and personal growth than either the mothers or the involuntarily childless women.

Age differences were hypothesized to show a pattern of results similar to Ryff (1991) with the older women scoring significantly lower on present ratings of personal growth. Actual - ideal self discrepancies were hypothesized to diminish in the older group of women, commensurate with Ryff's (1991) findings, indicating that a sense of congruence had developed between what the women perceived themselves to be and what they ideally wanted to be.

There is no research literature to support the hypothesized group differences in child-related regrets. Logically however, the involuntarily childless women were expected to mention more regrets around childlessness than the voluntarily childless women purely

because they had wanted to have children but could not. Since the onset of menopause is the termination of a woman's ability to bear children, it was hypothesized that the regrets should be stronger for the involuntarily childless women who are just starting or going through menopause as they would likely not have had much time to come to terms with their now permanent state of childlessness.

Hypotheses

The research hypotheses were as follows:

1. Psychological Well-Being
 - a) Group differences between voluntarily childless, involuntarily childless or mothers
 - i) Voluntarily childless women were hypothesized to score significantly higher than the involuntarily childless women on present ratings of self-acceptance, environmental mastery, and purpose in life.
 - ii) The voluntarily childless should have scored higher than both other groups of women on present self measures of autonomy and personal growth.
 - b) Age differences between middle-aged and elder women
 - i) Older women should have scored significantly lower on present ratings of personal growth.

c) Interactions

- i) All actual self and ideal self ratings were hypothesized to be significantly different as different possible selves are being measured.
- ii) Actual - ideal self discrepancies would diminish in the older group indicating a greater degree of congruence on each of the six dimensions.
- iii) Actual - ideal self discrepancies would be greatest for the involuntarily childless on the dimensions of self-acceptance, purpose in life, autonomy, environmental mastery and personal growth.

2. Regrets

- a) Group differences between voluntarily childless, involuntarily childless or mothers
 - i) Involuntarily childless women were expected to mention more regrets around childlessness than the voluntarily childless women on both the general elicitation of regrets and on the specific elicitation of child-related regrets.
- b) Age differences between middle-aged and elder women
 - i) Child-related regrets were hypothesized to be stronger for the younger group of involuntarily childless women than for any other

group as they had only recently left their childbearing years behind and may not have come to terms with their childlessness.

Method

Sample

Seventy-two voluntarily childless women, involuntarily childless women, and mothers participated in the study. The sample was also divided among peri and post menopausal age groups (45 to 54 years, 55 to 83 years). This resulted in the following six groups: younger voluntarily childless women (YVC), younger involuntarily childless women (YINV)), younger mothers (YM), older voluntarily childless women (OVC), older involuntarily childless women (OINV), and older mothers (OM).

Participants were recruited through articles in the local newspaper, high school staff notice boards, University notice boards, the University Graduate Student Newspaper, and recruitment from a seniors center. Each participant was also asked to mention the study to her friends, resulting in a number of participants being recruited via this “snowball” technique. As research on younger women indicates the voluntarily childless are better educated than average, participants were recruited such that education levels would be high in all groups (Pol, 1983; Houseknecht, 1979; Krishan, 1989).

Procedure

The protocol included the following: a demographic information questionnaire (Appendix B), including a four point question about present health (poor, fair, good, excellent); the Center for Epidemiological Studies Depression Scale (CES-D; Radloff,

1977, Appendix C); the Scales of Psychological Well-Being - Short Forms (Ryff, personal communication, 1995) for present and ideal selves (Appendix A); a regret questionnaire (Lecci et al., personal communication, 1995) to elicit general regrets first, and then a specific question about child-related regrets (Appendix D); and finally a semi-structured interview (Appendix E). Measures were administered in this order so that the assessment of well-being was not unduly influenced by the elicitation of regrets. The protocol was administered at either the university or the researcher's / respondent's home and took, on average, 2.5 hours. Semi-structured interviews were audio-taped for content analysis.

Measures

Depression

The 20 item Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977; Appendix C) was included to permit possible group differences in depression to be controlled statistically. The CES-D was specifically designed to be used with non-clinical populations and in cross-sectional survey research (Robinson, Shaver, & Wrightsman, 1991). This scale has demonstrated high reliability in community samples with alpha's from .87 to .90 (Connidis & McMullin, 1993; Radloff, 1977) and this is true of the present sample as well: Cronbach's alpha was .88. Scores can range from 0 to 60, with higher scores signifying increased frequency of depressive symptoms.

Psychological Well-Being

Six dimensions of psychological well-being were assessed using Ryff's (personal communication, 1995) Scales of Psychological Well-Being - Short Forms. This is an 84 item self report measure consisting of 6 separate sub-scales of 14 items each, designed to measure the separate dimensions of autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance (Appendix A). For definitions of each dimension see Table 1. Each item is scored on a 6 point Likert-scale from 1 (strongly disagree) to 6 (strongly agree), resulting in a maximum range of scores for each subscale from a minimum of 14 to a maximum of 84. The total score of all 6 subscales can range from a minimum of 84 to 504. Internal consistency (alpha coefficients) for the scales range from .83 to .91, and correlations with the 20-item parent scales range from .97 to .99 (Ryff, personal communication, 1995). Six week test-retest reliability of the 20-item parent scales ranged from .81 to .88 (Ryff, 1989b).

Internal consistencies of the scales obtained from this sample of participants were very similar to those reported by Ryff (personal communication, 1995) for the present selves, with coefficient alpha's ranging from .81 to .91. The ideal selves scales had slightly lower internal consistencies for the same items, ranging from .62 to .80.

Consistent with procedure adopted by Ryff (1991), this inventory was administered under two instructional conditions. First, participants were asked to indicate agreement or disagreement with each item based on how they feel about themselves in the present (Present Self). Next, each participant was asked to indicate agreement or

disagreement with each item based on the person they would most like to be -- their Ideal Self. In between the two instructional conditions, and to enable each participant to make this shift in thinking, each participant was asked four open-ended questions about the personal qualities they would most like to have, how they would like to change themselves, what they would like to be doing with their lives, and what goals or dreams about themselves they wanted to come true.

In summary, the 12 dependent variables derived from this measure of psychological well-being are measures of autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance for both present and ideal selves.

Regret

Regrets were conceptualized as unfulfilled or unattained intentions or goals that naturally accumulate in a person's life (Lecci et al., 1994). Each participant was told that:

“we are interested in knowing about a certain kind of personal goal, the unfulfilled or unattained goal, and about the various ways you think about these unfulfilled goals. Broadly speaking, unfulfilled goals represent important aims you have had in your life -- the outcomes you wished or sincerely hoped to have gotten at some point in time. All of us usually have a number of unattained goals that we may be thinking about. We would like you to list some of the goals that you wished you had pursued, but never did. For example, you may now wish that you had married your high school sweetheart, or pursued athletics more seriously when you were a

child. You may have only thought about some of them recently. Please list these unattained or unfulfilled goals (or what we call “regrets”) in column one below.”

(Lecci et al., personal communication, 1995).

In Lecci et al.’s (1994) study, the modal number of regrets was one. To avoid this problem, a demand characteristic was implied by leaving sufficient space on the first page for each participant to list 6 different regrets. More space was provided on a second sheet for anyone who needed it. Only 10 spaces were provided in all (Appendix D). No-one went beyond the “allowed” 10 regrets, although the researcher did indicate that they could go on if they wished.

The method of eliciting regrets was threefold, using a procedure modified from Lecci et al. (1994). First participants were asked a general question about “goals you wished or sincerely hoped to achieve, but never did”, i.e., unattained goals. After the initial elicitation of general regrets, each participant was asked to rank order her regrets. The regret that ranked highest was then rated along 14 dimensions: importance, distress (over not pursuing regret), difficulty (with not undertaking regret), progress, control (in choosing not to pursue regret), disappointment, impactfulness, other’s view of importance, hindrance (did important people hinder them in pursuing regret), desirability, conflict (with current goals), investment (how much time and energy was invested in regret), outcome (hypothetical -- how would it have turned out, if regret pursued) , and precludedness (temporarily put off or totally precluded).

Second, if no regrets around children were mentioned in response to the general question, a specific question was asked as to whether the woman “had any regrets around having or not having children, or parenting your children.” These regrets were then coded along the same 14 dimensions as the general regrets. Third, during the interview the women were asked again if they had any additional regrets. The third question related to either explaining the regrets on the questionnaire, or if none were mentioned, to asking if there had ever been a time when the woman had regrets around having or not having children.

In summary, the dependent variables were categories of general regret, child-related regret and 14 rating dimensions for the most important general regret and the most important child-related regret -- importance, distress, difficulty, progress, control, disappointment, impactfulness, other’s view of importance, hindrance, desirability, conflict, investment, outcome, and precludedness.

Semi-Structured Interview.

The final phase of inquiry was that of a semi-structured interview lasting approximately 1 hour. Each woman was asked a series of questions to explore her experience of childlessness or motherhood and whether or not she had any regrets associated with her choices around having or not having children (Appendix E). All participants were asked the same basic set of questions, but the researcher was not tied to asking only the questions on the protocol. If points needed clarifying, the researcher asked supplementary questions. These clarification questions were different, therefore, for

each interview. The interview was audiotaped to permit a detailed content analysis of the regrets mentioned.

A number of areas were of interest in the collection of the interview data. First and foremost, it was important to determine whether a woman was voluntarily childless, involuntarily childless or a mother as this categorization was then used to group the women for all of the data analyses. The second area of interest that came out early in the data collection, but was not conceived prior to the study, was whether a woman identified herself as childless or a mother “by choice” or “not by choice”. Of particular interest was that, for some involuntarily childless women and mothers, the determination of choice was independent of the voluntariness of her position. For example, some involuntarily childless women who tried unsuccessfully to conceive said they were childless by choice. Third, the reasons for having or not having children were of interest, both in a descriptive sense, and to assist in the categorization of the women into groups. Fourth, the presence and strength of current child-related regrets were examined to find out if there were differences across groups and across age groupings. Finally, changes in regrets over time for each woman were analyzed to ascertain if there is a process of coming to terms with regrets around childlessness, that is, evidence for the notion of congruence.

Content Coding and Inter-rater Agreement.

Two measures required content coding, the regret categories on the general regret questionnaire, and the content analysis of the semi-structured interview. Two raters did

all coding independently. The researcher was the first rater and a research assistant was the second rater.

The research assistant was a recent Psychology graduate in her mid-thirties, known to the researcher, with extensive experience in psychological research. She was hired purely for content coding and was not involved in any of the data collection or interpretation.

Regret questionnaire. Lecci et al.'s (1995, personal communication) coding manual was used for the general regret categories obtained in the initial elicitation of regrets. Each regret was coded into one of 15 content categories. Eleven of the content categories were identical to those of Lecci et al. (1994). These were: academic (school related), occupational, intimate relationships, friendships, spiritual / religious, health / self-care, self / trait, financial, leisure, temporal (non-specific references to wasting time), and other (for miscellaneous regrets that did not fit into any category). The changes that were made were: (1) to separate all regrets related to having or not having children from "family" to "children", resulting in categories of family (blood relatives - not including children) and children (any regret related to having, not having, or parenting children); and (2) to add two more categories -- travel and artistic pursuits.

There were two reasons for these changes. First, the separation of child related regrets from more general family related regrets goes directly to the point of this research. The focus is in examining specifically if women mention any regrets related to their childless or parental state, and also ascertaining how important these regrets were in

relation to other regrets the individual woman mentioned. Second, the addition of the travel and artistic pursuits categories was more data driven, as many women directly mentioned not pursuing these as regrets.

This modified coding manual (Appendix F) was used by both the researcher and research assistant to independently categorize all regrets mentioned by the participants into one of 15 content categories. Inter-rater reliability was then assessed via Cohen's kappa.

Semi-structured interview. The audio-taped interview data were analyzed by the researcher, who then made up the coding manual for the interview data. Separate coding manuals were constructed for each group (voluntarily childless, involuntarily childless and mother groups) as each group responded differently to many of the questions. The coding manuals were lengthy, detailed and comprehensive, to ensure complete coding of all interview data. The research assistant then listened to and coded each tape in its entirety.

The entire set of content codes was then analyzed by the researcher, and further interpretation was performed to ascertain which items were directly relevant to the study. This subset of items were then assessed for inter-rater reliability via Cohen's kappa.

Specific instructions were also given to the research assistant to check the categorization of each woman into voluntarily childless, involuntarily childless and mother groups. Definitional guidelines for involuntarily childless women were as follows : (1) if a

woman said she had tried to adopt, conceive or carry a pregnancy to term, (2) had not used contraceptives and did not get pregnant, (3) if circumstances made it impossible to have children (and she was disappointed by those circumstances); or (4) if she said she was childless not by choice, the woman was categorized as involuntarily childless. For the voluntarily childless women, definitional guidelines were as follows: (1) if the woman said that she had no desire for children, or (2) found the timing was never appropriate, or (3) changed her mind when in her fertile years to not wanting children; and (4) identified herself as childless by choice, she was categorized as voluntarily childless. For mothers, any woman who had children of her own, or had direct primary care of young children (through adoption or step-parenting), was categorized as a mother. The research assistant was instructed to be certain to have categorized the childless women before she reached the question on regrets. This was the only portion of the analysis that was not blind. Since separate coding manuals were used for each group of women, the research assistant always knew which group the participant had been assigned to.

Results

The results section is organized into 7 main areas: (1) power analysis, (2) summary of demographic information, (3) education levels of participants, (4) health and depression, (5) psychological well-being, (6) the regrets questionnaire, and (7) a content analysis of the semi-structured interview. The last three sections are of primary interest to this study.

The independent variables analyzed were group (voluntarily childless, involuntarily childless, and mothers) and age (younger women, aged 45 to 54, and older women, aged 55 to 83). The total scores for the measure of psychological well-being were examined, as were the six individual dimensions. The regret questionnaire was analyzed for the content and frequency of regrets mentioned, both for the general regrets listed, as well as for specific child-related regrets. Then the 14 dimensions along which the women rated their child related regrets was analyzed.

Finally, a content analysis of the semi-structured interview data is reported. Specific areas of interest to this study were analyzed from the entire interview data set. The analysis is reported by group for four main areas of interest: (1) did the women see themselves as childless or mothers by choice or not by choice, (2) what were their reasons for having or not having children -- what choices or circumstances led to being childless or being a mother, (3) what regrets did they experience in the present about being childless or being mothers, and (4) how have their feelings about being childless or being mothers changed over the years?

Power Analysis

With this sample of 72 women, analysis indicated that power should be .95 for main effects and .70 for interactions based on a factorial solution and differences of .5 standard deviations between group means. Therefore, if there were significant differences in the order of .5 standard deviations there was a very good chance of finding them with this sample size (Howell, 1992).

Demographics

The participants came overwhelmingly from the dominant culture: 71 participants were Caucasian, 1 younger involuntarily childless participant was from the First Nations. Table 2 summarizes the main demographic information for the participants by group. Collapsing across groups, the mean age of the younger group of women was 47.9 years and the mean age of the older group was 63.8.

A total of 34 women were married: 21 younger women were married, with a mean length of marriage of 17.48 years ($SD = 9.51$) and 13 older women were married for a mean of 32.77 years ($SD = 10.62$). Two younger women were in long term common-law relationships ($M = 12.5$ years, $SD = 2.2$). Fifteen women were separated or divorced, 7 women were widowed, and 10 women were single. Most of these single women were older voluntarily childless women (6 of the 10 single women). Four of these women said that they had never wanted to have children and had chosen not to marry, and two stated that they had wanted to have children earlier in life but had changed their minds because they could not find partners who would be good fathers. None of these women blamed their single status for their childlessness, in fact they all described their singleness as a choice too.

A disproportionately large percentage of younger voluntarily childless women, compared to any other group, claimed no present religious affiliation. These differences are mentioned purely for descriptive purposes.

Table 2. Demographics of participant sample

	Younger (45 - 54 yrs)			Older (55 - 83 yrs)		
	VC	INV	Mothers	VC	INV	Mothers
N	13	14	14	10	10	11
Age (<u>M</u> years)	47.00	49.36	47.36	62.50	63.60	65.09
<u>SD</u>	2.45	3.34	1.34	2.40	7.49	4.99
Age range (yrs)	45 - 51	45 - 54	45 - 49	55 - 78	57 - 83	55 - 73
Education (<u>M</u> years)	15.92	16.57	15.86	15.20	14.30	15.00
<u>SD</u>	2.10	1.65	1.23	2.66	2.67	2.93
Education range (yrs)	14 - 21	14 - 18	14 - 18	12 - 21	12 - 18	12 - 21
Marital Status - % (n)						
Single	15.4 (2)	14.3 (2)	0	60 (6)	0	0
Married	53.9 (7)	42.9 (6)	71.4 (10)	30 (3)	40 (4)	63.6 (6)
Separated	7.7 (1)	7.1 (1)	14.3 (2)	10 (1)	0	0
Divorced	15.4 (2)	28.6 (4)	0	0	20 (2)	18.2 (2)
Common Law	7.7 (1)	7.1 (1)	0	0	0	0
Widowed	0	0	7.1 (1)	0	40 (4)	18.2 (2)
Present Religion - % (n)						
None	69.2 (9)	28.6 (4)	14.3 (2)	30 (3)	10 (1)	9.1 (1)
Catholic	7.7 (1)	14.2 (2)	7.1 (1)	20 (2)	20 (2)	9.1 (1)
Protestant	23.1 (3)	42.9 (6)	78.6 (11)	50 (5)	70 (2)	81.2 (9)
Jewish	0	7.1 (1)	0	0	0	0
Buddhist	0	7.1 (1)	0	0	0	0
Health - % (n)						
Excellent	61.5 (8)	57.1 (8)	50.0 (7)	40 (4)	30 (3)	55.5 (6)
Good	30.8 (4)	35.7 (5)	42.9 (6)	50 (5)	70 (7)	45.5 (5)
Fair	0	0	7.1 (1)	10 (1)	0	0
Poor	7.7 (1)	7.1 (1)	0	0	0	0
Mean # of Children	n/a	n/a	2.1	n/a	n/a	2.8

Note. N = 72.

All percentages add to 100%, with some rounding error.

Education

Given that voluntarily childless women tend to be better educated (Houseknecht, 1979; Krishan, 1989; Pol, 1983; Veevers, 1980), participants of similar educational levels were recruited.

To check for a possible confound, education was analyzed via a 3 (group -- VC, INV, MOM) x 2 (age -- younger, older) factorial ANOVA. As mentioned earlier, this is a highly educated sample of women. All of the participants have at least a high school education. However, a statistically significant difference was found between the educational level of the younger women and the older women, $F(1,66) = 5.95$, $p < .05$, with the younger women achieving a mean educational level of 16.12 years and the older women achieving a level of 14.84 years (Table 3). Though this result is statistically significant, it is likely of little concern as both means are at the post-secondary level.

Table 3. Mean years of education

	Younger	Older
VC	15.92 (2.10)	15.20 (2.66)
INV	16.57 (1.65)	14.30 (2.67)
Mothers	15.86 (1.23)	15.00 (2.93)

Note. Standard deviations are in parentheses.

Health and Depression

Measures of health and depression were collected to ascertain if group differences on measures of psychological well-being and regret were related to group differences on these measures. In previous studies, poor health was found to be related to increased social isolation (Bachrach, 1980; Connidis & McMullin, 1992) and greater depression was related to poorer life satisfaction (Connidis & McMullin, 1993). No group differences were hypothesized.

Health and depression were analyzed via separate 3 (group -- VC, INV, MOM) x 2 (age -- younger, older) factorial analyses of variance (ANOVA's). Health was measured

on a four point scale: 0 - poor, 1 - fair, 2 - good, and 3 - excellent. CES-D scores can range from 0 to 60, with higher scores indicating higher frequencies of depressive symptoms; for the women in this sample CES-D scores ranged from 0 to 30, with mean values depicted in Table 4. Although, four women had CES-D scores within the "probable" range for clinical depression (scores over 23; Radloff & Teri, 1986), in general group scores were well within the normal range. There were no significant differences between any groups on measures of health or depression. Thus age or group differences in psychological well-being or regret are not attributable to differences in health or general negative affect.

Table 4. Health and CES-D mean scores

	Health		CES-D	
	Younger	Older	Younger	Older
VC	2.46 (.88)	2.30 (.68)	7.23 (8.40)	6.30 (7.40)
INV	2.43 (.85)	2.30 (.48)	11.14 (8.84)	8.22 (4.92)
Mothers	2.43 (.65)	2.55 (.52)	9.14 (8.44)	6.10 (9.35)

Note. Standard deviations are in parentheses.

Psychological Well-Being

Each of the six dimensions of the possible selves data (autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self acceptance) were analyzed via a 3 (groups -- VC, INV, Mothers) by 2 (age -- younger, older) repeated measures analysis of variance procedure, with repeated measurements made on the two separate self ratings of present and ideal selves. To take the most conservative approach to follow-up testing, Scheffé tests were used to test all possible

pairwise comparisons. All significant differences between means are illustrated by a dashed line on the figures associated with each variable (Figures 1 - 6).

Table 5 indicates the means and standard deviations, by group, age and present / ideal self, for the six dimensions of psychological well-being. Each item was scored on a 6 point Likert-scale from 1 (strongly disagree) to 6 (strongly agree), resulting in a maximum range of scores for each dimension from a minimum of 14 to a maximum of 84, with higher scores indicating better psychological well-being. The total score of all 6 subscales can range from a minimum of 84 to 504. Normative data has been included from Ryff (1989b), to permit comparisons to a larger group of women ($N=191$). This data has been prorated from the original 20-item scales to give results commensurate with the short forms (14 items from the original scales) used in this study. Normative data is available for the present selves ratings only.

Main Effects of Group Membership

Total Scores. Significant main effects for group were obtained between the VC, INV and mother's on the sum of all six dimensions, $F(2,62) = 3.61, p < .05$. The voluntarily childless women had the highest total scores and the involuntarily childless had the lowest total scores, indicating greater well-being among the voluntarily childless (Figure 1). There were no significant differences between means, however, on Scheffé follow-up tests.

Table 5. Means by group, age and present / ideal self, for the six dimensions of psychological well-being.

Outcome measure	Younger		Older	
	Present Self	Ideal Self	Present Self	Ideal Self
Total Score				
VC	426.92 (46.14)	479.31 (22.41)	439.40 (31.11)	478.00 (22.07)
INV	407.57 (43.65)	471.29 (21.34)	397.56 (40.48)	450.78 (30.03)
Mothers	412.69 (43.78)	467.92 (30.14)	438.67 (46.95)	469.22 (22.69)
Autonomy				
VC	70.15 (8.63)	77.46 (4.84)	74.70 (9.25)	76.50 (11.01)
INV	64.92 (9.31)	77.64 (5.64)	62.44 (8.46)	73.22 (4.89)
Mothers	64.71 (9.16)	74.36 (5.23)	66.09 (13.29)	73.55 (7.44)
Norm Data	61.33 (14.26)		60.83 (15.83)	
Environmental Mastery				
VC	68.85 (8.29)	80.77 (3.61)	72.00 (8.88)	81.10 (3.32)
INV	63.86 (9.49)	77.21 (4.74)	64.56 (10.06)	77.22 (6.87)
Mothers	66.00 (10.58)	80.07 (4.36)	70.18 (8.32)	78.64 (5.48)
Norm Data	65.59 (15.66)		65.43 (16.25)	
Personal Growth				
VC	76.39 (5.19)	81.15 (3.31)	73.80 (7.64)	80.20 (3.77)
INV	73.14 (7.97)	80.43 (4.97)	74.00 (6.54)	78.11 (2.94)
Mothers	73.29 (9.69)	78.79 (8.05)	75.18 (7.91)	80.37 (4.46)
Norm Data	70.68 (13.38)		66.86 (13.94)	
Positive Relations with Others				
VC	71.77 (13.03)	79.77 (7.34)	70.90 (5.55)	81.00 (2.54)
INV	70.93 (9.53)	79.07 (5.62)	66.33 (8.94)	75.78 (8.06)
Mothers	71.23 (11.56)	78.69 (6.33)	74.91 (8.06)	79.64 (5.61)
Norm Data	67.25 (15.40)		66.52 (16.80)	
Purpose in life				
VC	70.77 (13.22)	80.00 (4.95)	73.70 (9.37)	80.00 (3.30)
INV	67.07 (8.40)	77.36 (5.87)	66.22 (11.38)	73.56 (6.89)
Mothers	74.64 (8.98)	79.21 (5.93)	70.00 (12.36)	76.82 (5.49)
Norm Data	66.83 (17.18)		62.01 (16.14)	
Self acceptance				
VC	69.00 (13.39)	80.15 (5.00)	74.30 (7.57)	79.20 (6.71)
INV	67.64 (12.30)	79.57 (4.35)	64.00 (13.08)	72.89 (9.44)
Mothers	66.00 (12.45)	77.54 (6.27)	72.22 (11.01)	78.33 (4.80)
Norm Data	65.49 (19.03)		62.30 (19.75)	

Note. Standard deviations are in parentheses.

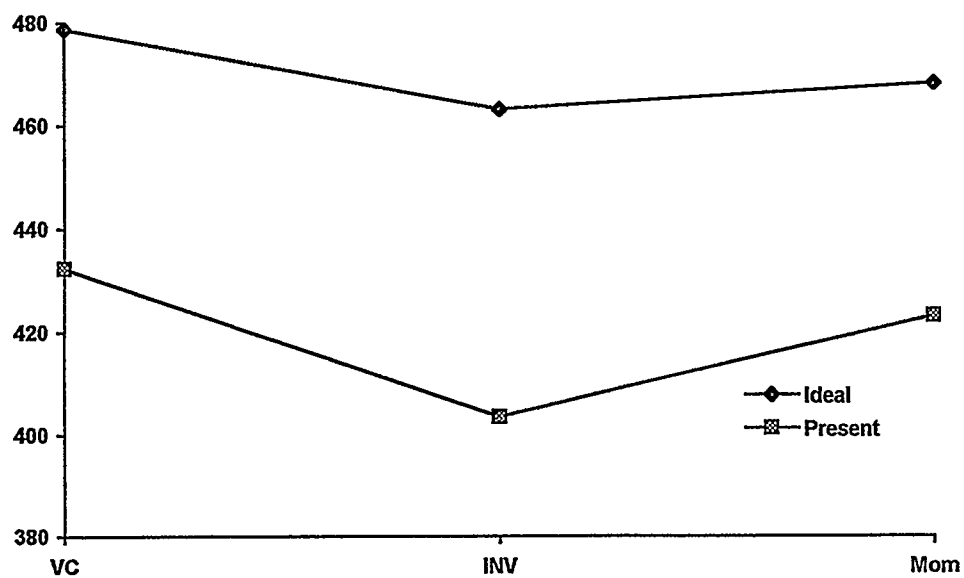


Figure 1. Sum total of all 6 dimensions of psychological well-being - significant main effect of group.

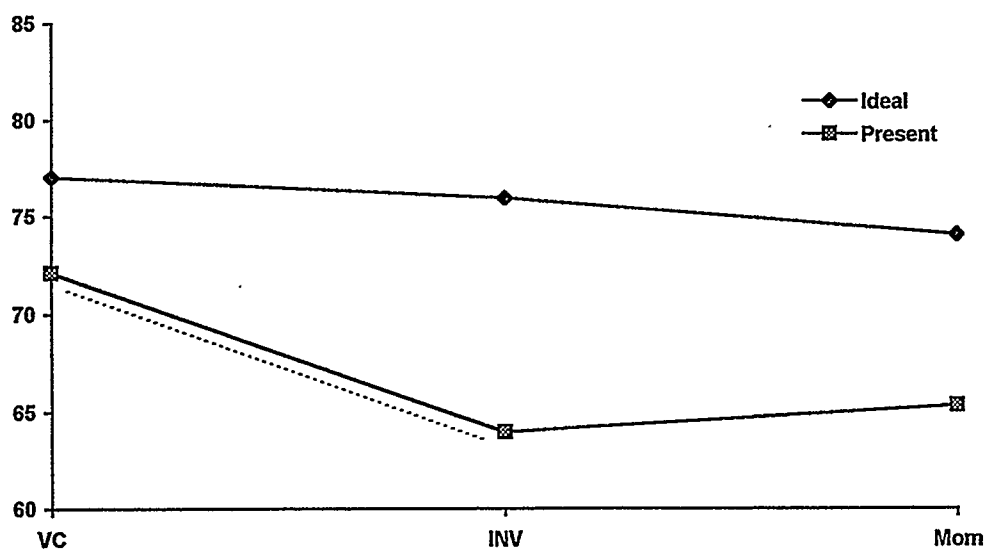


Figure 2. Autonomy: Significant Status x Self-ratings interaction. (Dashed lines indicate significant differences across groups.)

Autonomy. It was hypothesized that the voluntarily childless women should score significantly higher than the other two groups of women on present self ratings of autonomy. This hypothesis was partly borne out by the data. The voluntarily childless women rated their present selves as significantly more autonomous than do the involuntarily childless women (Figure 2).

Environmental Mastery. It was hypothesized that the voluntarily childless women should score significantly higher than the involuntarily childless women on present self ratings of environmental mastery. This hypothesis was borne out by the data. Figure 3 shows the significant main effect of group on scores of environmental mastery, $F(2,65) = 4.42, p < .05$, with the voluntarily childless women scoring significantly higher than the involuntarily childless women on present self ratings.

Purpose in Life. It was hypothesized that the voluntarily childless women should score significantly higher than the involuntarily childless women on present ratings of purpose in life. This was not borne out by the data. Figure 4 shows the significant main effect of group on purpose in life, $F(2,65) = 3.09, p = .05$, with the voluntarily childless scoring higher than the involuntarily childless women on ideal self ratings.

Main Effects of Age

Contrary to research hypotheses there were no main effects of age on any of the six dimensions of psychological well-being.

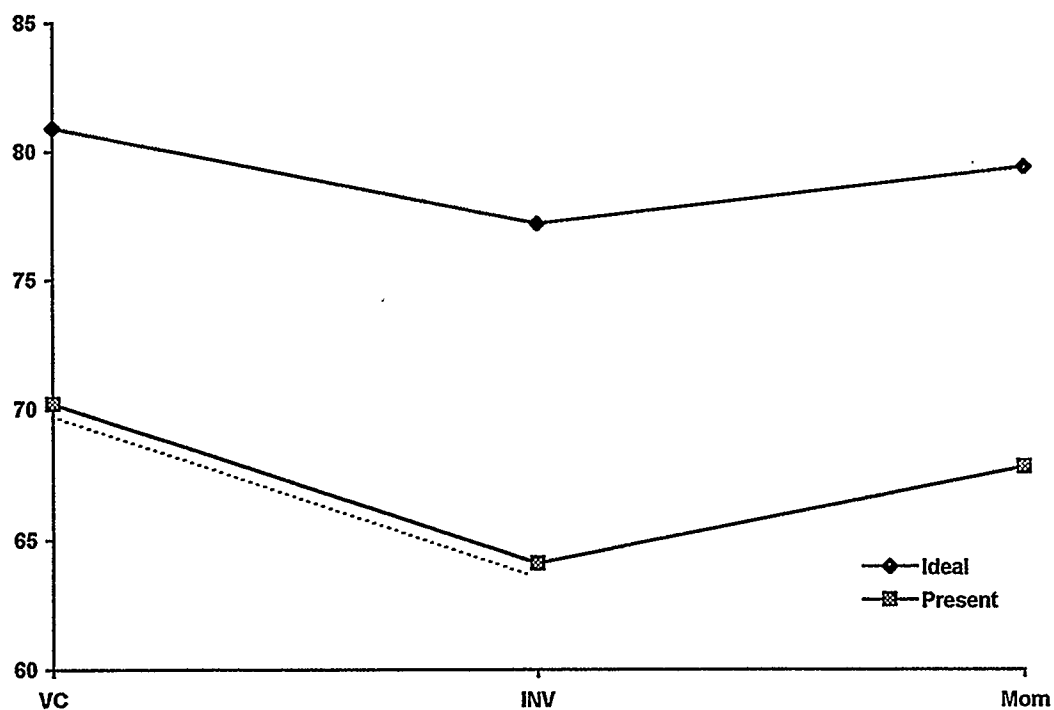


Figure 3. Environmental Mastery: Significant main effect of status. (Dashed lines indicate significant differences across groups.)

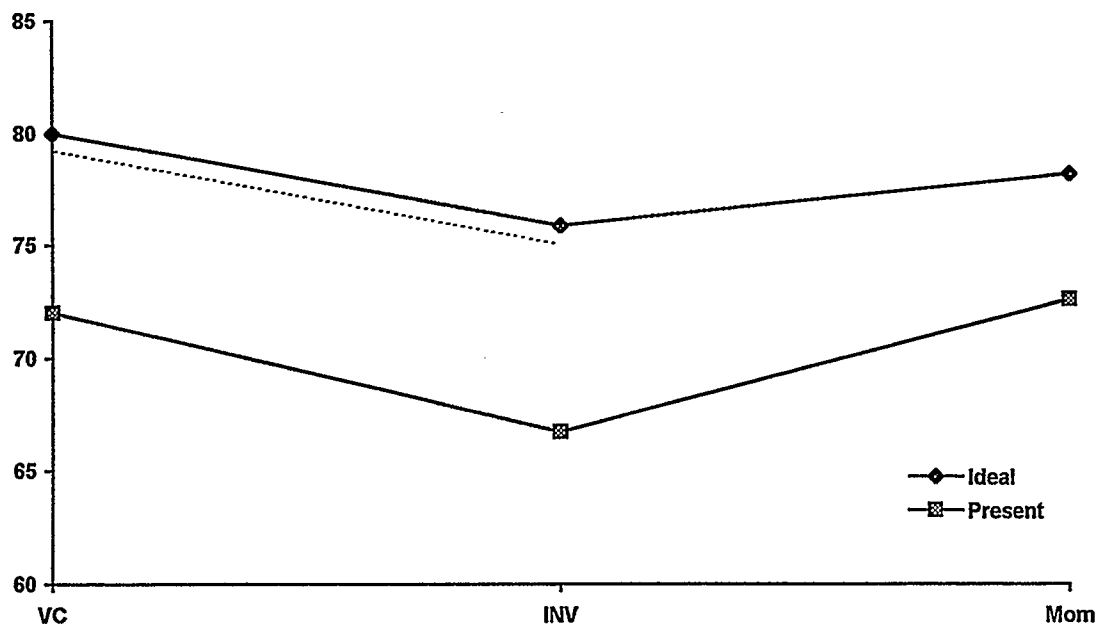


Figure 4. Purpose in Life: Significant main effects of status. (Dashed lines indicate significant differences across groups.)

Main Effects of “Self” -- Present versus Ideal Selves

Significant main effects were found for all self-ratings; i.e., ideal and present possible selves were significantly different for all dimensions. This result was expected, as it indicated the women were able to perceive a difference between the way they rated their present psychological well-being and how they would ideally like to be. Therefore, significant main effects of “self” will not be discussed further.

Interactions

Autonomy. Figure 2 shows the significant group by self-ratings interaction, $F(2,65) = 3.22, p < .05$, found for the autonomy scale. While none of the groups differ significantly on ideal self ratings, the voluntarily childless women rated their present selves as significantly more autonomous than do mothers or the voluntarily childless.

Self-Acceptance. It was hypothesized that present / ideal self discrepancies should be smaller for the older women. This was borne out by the data. Figure 5 shows the significant disordinal interaction of age and self-rating, $F(1,62) = 4.11, p < .05$. The discrepancy between present and ideal self-ratings on self acceptance was smaller for the older group of women than for the younger, indicating that the older women were closer to their ideal. Interestingly, however, while the older women had higher present ratings of self-acceptance than the younger women, the ideal that they wish to be was lower than that of the younger women.

Table 6 summarizes the findings from the analyses on psychological well-being.

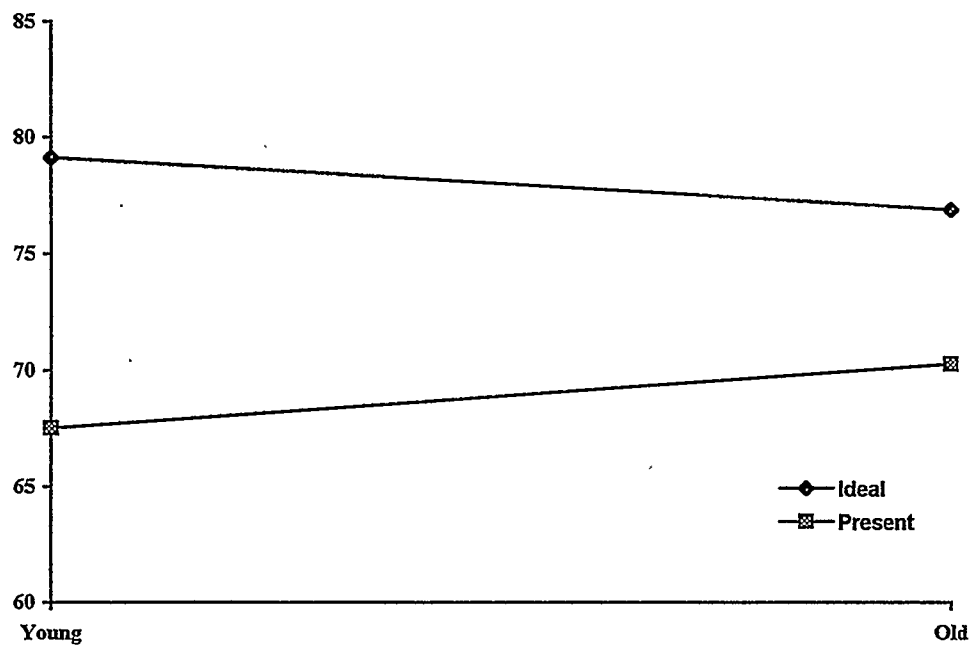


Figure 5. Self Acceptance: Significant interaction of age and self-rating.

Table 6. Summary of findings from analysis of psychological well-being data.

	Group differences	Age differences	Interactions
Total scores	main effect	none	
Autonomy	VC > INV on present self ratings	none	smaller present / ideal self discrepancy for VC women
Environmental mastery	VC > INV on present self ratings	none	
Personal growth	none	none	
Positive relations with others	none	none	
Purpose in life	VC > INV on ideal self ratings	none	
Self Acceptance	none		smaller present / ideal self discrepancy for older women

Regrets Questionnaire

Initial Elicitation of Regrets

It was hypothesized that the involuntarily childless women would spontaneously mention more regrets around childlessness than the voluntarily childless women. This hypothesis was not borne out in the data.

A 3 (groups -- VC, INV, and Mothers) by 2 (age -- younger, older) analysis of variance was performed on the number of general regrets mentioned. There were no significant group differences in the number of regrets comparing the voluntarily childless, the involuntarily childless and the mothers. There was a significant age difference in the

number of general regrets mentioned, $F(1,66) = 15.03$, $p < .001$, with the older group of women mentioning fewer regrets ($M = 3.94$) than the younger women ($M = 5.76$).

The content categories, and the percentage of total responses that fit that category can be seen in Table 7. Inter-rater agreement (κ) on content-coding was .89. Two additional content categories, spiritual / religious and temporal (non-specific regrets about wasting time) were omitted because of the paucity of responses (1 and 2, respectively). As well, to permit direct comparisons with Lecci et al. (1994), “leisure”, “travel” and “artistic pursuits” are also shown combined in Table 7. Tables 8 and 9 present the rank order of regret categories for groups and ages, respectively. As can clearly be seen, academic, occupational and artistic pursuit regrets rank highly for all groups and ages.

Table 7. Content and percentage of total regrets by group and age for the regret questionnaire -- general regret elicitation.

Regret Content	VC	Younger INV	Mom	VC	Older INV	Mom	Total Sample
total # of regrets	68	88	82	36	36	50	360
Academic	19.12 (n=13)	9.09 (n=8)	17.07 (n=14)	25.00 (n=9)	13.89 (n=5)	14.00 (n=7)	15.56 (n=56)
Occupational	23.53 (n=16)	15.91 (n=14)	4.88 (n=4)	2.78 (n=1)	8.33 (n=3)	12.00 (n=6)	12.22 (n=44)
Family	10.29 (n=7)	10.23 (n=9)	8.54 (n=7)	2.78 (n=1)	11.11 (n=4)	6.00 (n=3)	8.61 (n=31)
Intimate Relationships	11.77 (n=8)	11.36 (n=10)	8.54 (n=7)	11.11 (n=4)	2.78 (n=1)	4.00 (n=2)	8.89 (n=32)
Friendships	1.47 (n=1)	2.27 (n=2)	2.44 (n=2)	0	0	0	1.39 (n=5)
Health / Self care	7.35 (n=5)	5.68 (n=5)	1.22 (n=1)	11.11 (n=4)	2.78 (n=1)	4.00 (n=2)	5.00 (n=18)
Self / trait	1.47 (n=1)	2.27 (n=2)	2.44 (n=2)	0	2.78 (n=1)	10.00 (n=5)	30.56 (n=11)
Financial	4.41 (n=3)	4.55 (n=4)	6.10 (n=5)	5.56 (n=2)	5.56 (n=2)	2.00 (n=1)	4.72 (n=17)
Leisure	1.47 (n=1)	5.68 (n=5)	8.54 (n=7)	2.78 (n=1)	16.67 (n=6)	6.00 (n=3)	6.39 (n=23)
Children	4.41 (n=3)	6.82 (n=6)	10.98 (n=9)	8.33 (n=3)	8.33 (n=3)	8.00 (n=4)	7.78 (n=28)
Travel	7.35 (n=5)	3.41 (n=3)	6.10 (n=5)	5.56 (n=2)	2.78 (n=1)	6.00 (n=3)	5.28 (n=19)
Artistic Pursuits	2.94 (n=3)	10.23 (n=9)	12.20 (n=10)	19.44 (n=7)	19.44 (n=7)	14.00 (n=7)	11.94 (n=43)
Leisure + travel + art	11.76 (n=9)	19.32 (n=17)	26.84 (n=22)	27.78 (n=10)	38.89 (n=14)	26.0 (n=13)	23.61 (n=85)

Table 8. Rank order of regrets based on frequency mentioned for each group.

VC (n=104)	INV (n=120)	Mothers (n=128)
1 - Academic	1 - Occupational	1 - Academic
2 - Occupational	2 - Artistic Pursuits	2 - Artistic Pursuits
3 - Intimate relationships	3 - Academic	3 - Children
4 - Artistic Pursuits	3 - Family (blood relatives)	4 - Other
5 - Health / Self-care	4 - Intimate relationships	5 - Occupational
6 - Family (blood relatives)	5 - Children	5 - Family (blood relatives)
7 - Travel	5 - Other	5 - Leisure
8 - Children	6 - Health / Self-care	6 - Intimate relationships
9 - Financial	6 - Financial	7 - Travel
10 - Other	7 - Travel	8 - Self / Trait
	8 - Self / Trait	9 - Financial

Note. Categories are not listed if mentioned 2 or fewer times by that group. The numbers represent the rank value for each regret category for each group.

Table 9. Rank order of regrets based on frequency mentioned by age.

Younger (n=231)	Older (n=121)
1 - Academic	1 - Academic
2 - Occupational	1 - Artistic Pursuits
3 - Intimate relationships	2 - Occupational
4 - Family (blood relatives)	2 - Leisure
5 - Artistic Pursuits	2 - Children
6 - Children	2 - Other
7 - Other	3 - Family (blood relatives)
8 - Leisure	4 - Intimate relationships
9 - Financial	4 - Health / Self-care
10 - Health / Self-care	5 - Self / Trait
11 - Friendships	5 - Travel
11 - Self / Trait	6 - Financial

Specific Elicitation of Child-Related Regrets

After the initial, general elicitation of regrets was completed, if a woman had not mentioned any regrets pertaining to having or not having children, she was specifically asked if she had regrets in this area. The analysis of child related regrets in this section combines the most highly ranked child related regret spontaneously mentioned in the initial general regret question with those regrets elicited at this stage.

Table 10 lists the child related regrets by status and age group. The regrets were been coded into 6 main categories. The first category is that the woman has no regrets about having, not having or parenting her children. The second category pertains to any general regret that the woman wanted to have children, couldn't have children, or regretted not having children -- this category presumes present childlessness. The third category was for mothers who mentioned general regrets around wanting to have more children, whether it be having another son or daughter. Fourth, parenting regrets were coded a little more generally. Any comments about being less harsh, spending more time, having more fun, or just enjoying their children more were categorized as parenting regrets. Finally, two women regretted giving up babies for adoption, and one woman regretted an abortion she had had as a young woman -- these were left as separate categories.

Fifty-four percent of women did not regret their status as childless women or mothers (Table 10). However, a total of approximately 30% of the voluntarily childless women in both age groups did regret not having had children, not keeping their baby, or

having had an abortion. Fifty percent of the involuntarily childless women in both age groups regretted either not having children or not having kept their children. A chi-square analysis was performed on the apparent group differences between the childless women and a significant difference was found between the voluntarily childless and the involuntarily childless in the number of women who experience no regrets and the number of women who do experience regrets, $\chi^2 (1, N = 47) = 8.33, p < .05$, around not having children. There are no significant age differences in the number of childless women who experience no regrets and the number who do experience regrets around being childless. Obviously, the mothers were excluded from this analysis as none of them regretted having their children, making comparisons somewhat meaningless.

Table 10. Child related regrets by group and age

Content	Younger			Older			Total
	VC	INV	Mom	VC	INV	Mom	
No regrets	69.23	50.00	28.57	70.00	50.00	63.64	54.17
have no children	15.38	42.86		30.00	50.00		22.22
wanted more			57.14				11.11
parenting regrets			14.29			36.36	8.33
not keeping baby	7.69	7.14					2.78
having abortion	7.69						1.39

Note. Table entries are percentage of participants mentioning each regret

Questionnaire rating dimensions for child related regrets. Each woman was asked to rate her regrets around having / not having children along 14 dimensions: importance, distress (over not pursuing regret), difficulty (with not undertaking regret), progress, control (in choosing not to pursue regret), disappointment, impactfulness, other's view of importance, hindrance (did important people hinder them in pursuing regret), desirability,

conflict (with current goals), investment (how much time and energy was invested in regret), outcome (hypothetical -- how would it have turned out, if regret pursued), and precludedness (temporarily put off or totally precluded).

When the dimensions along which the women rate their regrets about children were examined, there were no significant group differences for all but one dimension -- "how disappointed are you that you didn't pursue this regret". A 3 group by 2 age ANOVA indicated that there was a significant main effect of group on this rating dimension, $F(2, 27) = 11.057, p < .05$. The voluntarily childless women were significantly less disappointed about not having children than the involuntarily childless women. The voluntarily childless women's child-related regrets were also significantly less of a disappointment than the mother's child-related regrets (Figure 6).

Semi-structured Interview Data

All of the audiotaped data were content coded by independent raters, to permit the most complete analysis of the interview data. The researcher content coded all questions on all tapes and then passed the audiotapes and coding manuals to the research assistant. The coding manuals were constructed separately for the voluntarily childless, involuntarily childless and mothers, as many of the responses were unique to each group. The research assistant then coded all the tapes based on the researcher's content codes. The research assistant was instructed to ascertain which categories were mentioned by each participant.

As was mentioned earlier, the research assistant was also instructed as to the criteria by which a woman was to be categorized as voluntarily or involuntarily childless.

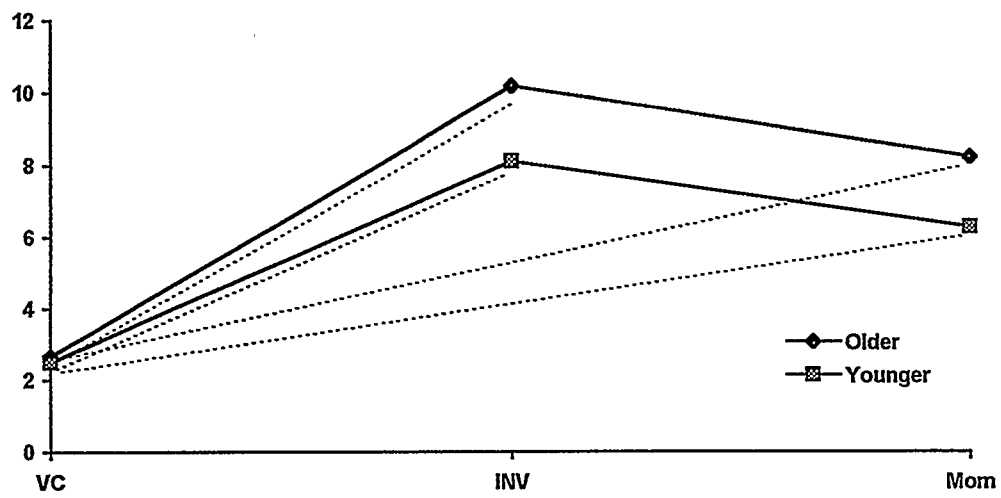


Figure 6. Rating of disappointment with not having pursued child related regrets. (Dashed lines indicate significant differences across groups.)

If a woman said she had tried to adopt, conceive or carry a pregnancy to term, had not used or avoided the use of contraceptives and did not get pregnant, if circumstances made it impossible to have children (wherein she was disappointed by those circumstances) or if she said she was not childless by choice, the woman was categorized as involuntarily childless. If the woman said that she had no desire for children, or had found the timing was never appropriate, or had changed her mind when in her fertile years to not wanting children and identified herself as childless by choice, she was categorized as voluntarily childless. The research assistant was instructed to be certain to have categorized the childless women before she reached the question asking about regrets. Inter-rater agreement was 100% on categorizing the women into voluntarily childless, involuntarily childless or mother groups.

After the entire data set had been coded the researcher then decided which of the questions and content categories would be subjected to further analysis. Those that were included pertained directly to the reasons for a participant having or not having children, whether she had any regrets around her status as a childless woman or a mother, and whether her feelings about being childless or a mother had changed over time. Inter-rater reliabilities for content coding of the interview data were high, Cohen's kappa ranged from .91 to .97 for the 6 different groups of women (Table 11). Categories that were mentioned too infrequently (by less than 2 participants in each group) were dropped from further analysis. In Tables 12 to 21, the tables presenting the semi-structured interview

results, the categories listed are not mutually exclusive. This must be borne in mind when examining the results.

Table 11. Inter-rater reliabilities (κ) for interview content categories.

	Younger	Older
Voluntarily Childless	.92	.95
Involuntarily Childless	.94	.94
Mothers	.97	.91

Self Identification of “by choice” or “not by choice”

In the opening interview question women were asked if they were childless or mothers “by choice” or “not by choice”. This question was designed to enable the woman to speak about her impressions of how she came to be childless or a mother.

Serendipitously this also resulted in information on how some of the involuntarily childless women have dealt with not being able to have children.

Voluntarily childless women. All of the voluntarily childless women identified themselves as “childless by choice”. They could remember a point in time where remaining childless became a choice for them.

Involuntarily childless women. Forty three percent of the younger and 30% of the older involuntarily childless women described themselves as childless by choice (Table 12). Their explanation for this apparent contradiction was that they came to a point of decision -- whether to keep trying to have or adopt a child, or to adopt a childless lifestyle instead. In all cases of an involuntarily childless woman considering herself as childless by choice,

she chose the path of adopting the childless lifestyle and looking ahead to the future rather than back to lost opportunities.

The involuntarily childless women who saw themselves as childless not by choice did not appear to have reached a point where they could release the past and its lost opportunities. This feeling that they are childless not by choice was also related to more regret.

Table 12. Involuntarily childless women -- by choice or not by choice

	Younger		Older	
	N	%	N	%
by choice	6	42.9	3	30.0
not by choice	8	57.1	6	60.0

Mothers. The great majority of mothers viewed themselves as mothers by choice (Table 13). Those few mothers that viewed themselves as mothers not by choice were all women whose first pregnancies were “accidents”, therefore they had not “chosen” to become mothers, “it just happened”. However, none of the mothers regretted having her children, or being a mother.

Table 13. Mothers -- by choice or not by choice

	Younger		Older	
	N	%	N	%
by choice	12	85.7	8	80.0
not by choice	2	21.4	3	30.0

Reasons for having or not having Children

As has already been mentioned, in the opening question to the interview, women were asked if they were childless or mothers by choice or not by choice. The women were then asked to explain their answer to the first question. This was to elicit information about the reproductive histories of the women to enable the researcher to assign each childless woman to the voluntarily childless or involuntarily childless groups. Mothers were asked the same question to elicit how they had come to have children. This question was not designed ask why they wanted or didn't want children, but why they do or do not have children.

Voluntarily childless women. The majority (77%) of younger voluntarily childless women at some time in the past thought that they would have children, but either postponed having children (23.1%) or decided consciously at some point that they would not have children (53.8%; Table 14), whereas only 40% of the older group fell into this category. Instead, the majority of older voluntarily childless women (60%) had "never" wanted to have children, while only 23% of the younger group gave this reason.

Table 14. Reasons voluntarily childless women have no children

	Younger		Older	
	N	%	N	%
never wanted children - no desire	3	23.1	6	60.0
once thought would have children - changed mind	7	53.8	0	0
never the right time - postponed	3	23.1	4	40.0

Involuntarily childless women. The majority of younger involuntarily childless women (78.6%) and 50% of the older involuntarily childless women experienced fertility

problems, yet only three women (12%) out of the entire sample of involuntarily childless women mentioned seeking assistance for the couple's infertility (Table 15). Involuntarily childless women also mentioned problems of circumstance; experiencing marital difficulties, marrying late, or remaining single, which made it impossible for them to have the children they desired.

Three women mentioned the severe emotional pain of being childless. One woman, aged 46, still hoped to be able to conceive through a fertility programme, and was still experiencing severe emotional distress over her childless state. Two other women, in the older group, lost babies well into pregnancy or at birth. They both spoke of the incredible feeling of loss and pain that took decades to deal with. One of these women commented that only a few years ago she would never have volunteered to participate in this type of study because the feeling of pain was so intense. In addition, two other women declined to participate after phoning the researcher for more information, as their pain and feelings of loss were too intense to discuss.

Table 15. Reasons involuntarily childless women have no children

	Younger		Older	
	N	%	N	%
tried to get pregnant / have a child	11	78.6	5	50.0
had miscarriage(s)	4	28.6	3	30.0
husband infertile	2	14.3	0	0
due to marital difficulties	4	28.6	3	30.0
married late	3	21.4	1	10.0
never married	2	14.3	1	10.0
went for infertility testing	2	14.3	1	10.0

Mothers. Only one mother said that she had been “forced” against her will to have her first child. Even so, this woman made it quite clear that she did indeed want to be a mother. The vast majority, 93% of the younger group and 82% of the older group, wanted or intended to get pregnant (Table 16). The “unplanned” or “accidental” pregnancies that some women mentioned were definitely not unwanted pregnancies. In fact, all of the mothers in the study had desired to have children.

Table 16. Reasons mothers have children

	Younger		Older	
	N	%	N	%
wanted or intended to get pregnant	13	92.9	9	81.8
first pregnancy “accidental” or “unplanned”	3	21.4	1	9.1

Presence and Strength of Current Regrets

The interview question on child-related regrets referred directly to the regret questionnaire, therefore the patterns of current regret on the two measures were not significantly different. The interview did, however, permit the researcher to explore the regrets further, as well as to include any other regrets that were mentioned.

Voluntarily childless women. The pattern of regrets mentioned by the voluntarily childless women in the interview was very similar to the pattern of their responses on the regrets questionnaire (Table 17). The difference for the younger group, however, can be seen in the percentage of regrets that were considered to be minor (71.4%) -- they were described as “momentary”, “fleeting”, or “more a curiosity than a regret”. These “twinges” were so minor that many of the women were reluctant to consider these feelings

to be regrets at all. All but one of the voluntarily childless women reported either that they have no current regrets and that any twinges they feel are too minor to consider regrets, or if they had current regrets that these were minor, not “earth shattering” or were “passing thoughts”. One younger voluntarily childless woman mentioned intense present regrets that have occurred to her only recently.

Table 17. Current regrets of voluntarily childless women

	Younger		Older	
	N	%	N	%
no present regrets	9	69.2	8	80.0
do experience current regrets	4	30.8	2	20.0
regrets are not earth shattering - more curiosity	10	71.4	2	20.0
regret not having experience of raising a child	3	23.1	0	0

Involuntarily childless women. The pattern of responses of the involuntarily childless women were very interesting. The combined categories are shown in Table 18. This table does not tell the full story for this group of women, however, as there are clear differences between those who consider themselves childless by choice or not by choice.

Of the involuntarily childless women who view themselves as “childless by choice”, only 33% experienced current regrets (1 out of 3 for the younger group, and 2 out of 6 for the older group). However, those involuntarily childless women who viewed themselves as “childless not by choice” had a greater percentage of women experiencing regret. In the younger group 75% (6 of 8) experienced regrets in the present, and 67% (4 of 6) in the older group still experienced regret.

The solitary younger, and one of the older, involuntarily childless women who considered themselves to be childless by choice and who did report current regret described their feelings in the same way that the voluntarily childless women did. Their feelings were more a “curiosity not a regret”. One younger and two older involuntarily childless women who did not see themselves as childless by choice also reported that their feelings of regret were “not deep or important” they were “minor” and “fleeting”. The other 5 younger and 4 older involuntarily childless women did not qualify their regrets as minor or unimportant.

Table 18. Current regrets of involuntarily childless women

	Younger		Older	
	N	%	N	%
no present regrets	7	50.0	4	40.0
do experience current regrets	7	50.0	6	60.0
feel left out - didn't experience pregnancy, child-birth or traditional family	6	42.9	3	30.0
we would have been good parents	3	21.4	0	0
not important or deep regrets	5	35.7	5	50.0

Mothers. Young mothers experience significantly more regrets the older mothers with most of these regrets pertaining to wishing they had more children (Table 19). Though the older mothers do have more children ($M = 2.82$, $SD = 1.33$) than the younger mothers ($M = 2.07$, $SD = 1.38$), these differences are not significant, $F(1,23) = 1.86$, $p = .19$. None of the mothers mentioned any regrets about having their children, or being mothers.

Table 19. Current regrets of mothers

	Younger		Older	
	N	%	N	%
no present regrets	4	28.6	6	54.5
do experience current regrets	10	71.4	3	27.3
wish I had another / more children	8	57.1	0	0
regrets about timing or spacing of children	3	21.4	0	0
regrets about parenting	4	28.6	4	36.4
only fleeting regrets when problems arise	1	7.1	3	27.3

Changes in Regrets over Time -- Coming to Terms

A number of questions tapped the notion of how the woman's feelings about having or not having children had changed over time (see questions 8, 14, 16, and 19, from the Semi-structured questionnaire in Appendix E). The responses to these questions were all combined and collapsed into the following analyses. Unfortunately, two questions designed to tap possible future changes in feelings (questions 9 & 15) did a poor job of eliciting responses and were dropped from the protocol.

Voluntarily childless women. Only 2 voluntarily childless women, from the younger group, mentioned their feelings of regret getting stronger recently (Table 20). One woman mentioned that she is now concerned about who will get her possessions, something that she has not been concerned about in the past. The other woman had unfortunately begun to experience very strong feelings that her life had no purpose without children. Her feelings of regret were new to her and were fresh and strong, coloring much of her interview.

On a more optimistic note, the rest of the voluntarily childless women who reported that their feelings had changed, indicated that their regrets had either faded with the years, were still fading (larger in the past), or that they were even more convinced that their decision to remain childless was the right decision.

Table 20. Voluntarily Childless Women -- Changes in the experience of regret over time.

	Younger		Older	
	N	%	N	%
no change	1	7.7	3	30.0
regrets have gotten stronger	2	15.4	0	0
regrets have faded	2	15.4	1	10.0
feelings of regret were larger in the past	2	15.4	2	20.0
more convinced it's right decision / happy with life	8	57.1	4	40.0

Involuntarily childless women. Table 21 indicates that 50% of both the younger and older involuntarily childless women were relatively content with the way their lives had turned out. However, the involuntarily childless women often endorsed double categories of change in their feeling of regret, indicating some ambivalence in their responses. This was true of one older involuntarily childless woman, and five younger involuntarily childless women. These ambivalent combinations included saying both that they were happy with the way their lives had turned out and that they were experiencing regrets in the present.

Table 21. Involuntarily Childless Women -- Changes in the experience of regret over time.

	Younger		Older	
	N	%	N	%
regrets have gotten stronger	3	21.4	2	20.0
have some feelings of regret now	3	21.4	1	10.0
regrets have faded	3	21.4	1	10.0
feelings of regret larger in the past	2	14.3	2	20.0
I like my life the way it is -- turned out for the best	7	50.0	5	50.0

Mothers. Questions referring to whether a woman's feelings had changed about having children as she got older, or might change, were dropped from the mother's protocol early in the study as, more often than not a surprised "No" was given in response.

Discussion

The results of this study indicate that, as hypothesized, the middle-aged and older voluntarily childless women did not have strong regrets about being childless and any regrets they did have were diminishing with the passage of time. Similarly, their psychological well-being was not adversely affected. These findings fly in the face of pronatalist stereotypes and expectations that voluntarily childless women should be less happy and satisfied at age 65 (Jamison et al., 1979), or that they should regret being childless (Alexander, et al., 1992). In addition, the majority of the voluntarily childless women reported a feeling of satisfaction with the way their lives had turned out, indicating that the sense of ego-integrity was beginning to be established, even for the women still in middle-age.

The involuntarily childless women cannot be so neatly summarized. Some of the involuntarily childless women had come to a sense of closure about being childless and had actively embraced a childless lifestyle. These involuntarily childless women were very similar to the voluntarily childless women, in that they did not have strong regrets, these regrets were also diminishing with the passage of time, and a sense of satisfaction had developed with the way their lives had turned out. Other of the involuntarily childless women, however, were experiencing feelings of regret, and were less satisfied with their lives. It is only this latter subgroup of involuntarily childless women that even remotely resembles the pronatalist expectation and stereotype of the unhappy, unsatisfied, regretful older woman that despairs of her childless life.

The results will be discussed in more detail below. The discussion is organized in a manner parallel to the results section. Demographic data are discussed first, followed by health and depression, and then education data. The psychological well-being data are discussed next, followed by the regret questionnaire and semi-structured interview data.

Demographic information

Two results of interest were obtained in the demographic information. The first was that a majority of older voluntarily childless women were single. This appears to be a new result in the literature. These older single voluntarily childless women, in the main, stated that they were not motivated to have children, which was also a reason why they said they were not highly motivated to marry. Not only did these women reject the notion that a woman must have children, but they also rejected the notion that a woman must

marry. While these results obviously cannot be generalized to all elder single childless women, it certainly raises the possibility that many women who wanted to remain childless either chose not to marry or were unable to find partners of like mind.

The second result of interest was that the highest percentage of women in both age groups to claim no religious affiliation were the voluntarily childless. However, it was the younger voluntarily childless women who were particularly noteworthy in this respect, almost 70% claimed no religion. This lack of religiosity in the voluntarily childless has been noted by other researchers. Houseknecht (1979b) found the majority, 53%, of her voluntarily childless respondents (mean age = 30) claimed no religion. Similarly, Veevers (1980) found that 74% of her sample of 254 childless individuals between the ages of 23 and 78 ($M = 35.8$ years) claimed no religious affiliation compared to 7% of a reference sample of 419 parents.

Education

The women who participated in this study were also highly educated, compared to the general population. Of the entire sample of women in this study, 86% had post secondary educations, achieving an average educational level of 15.5 years. In comparison, of the general Canadian population aged 55 and over, 65% have some secondary school or less (i.e., less than Grade 12 education), and 35% have secondary school or more (Statistics Canada, 1986b, 1986c, as cited in Connidis & McMullin, 1992).

Other studies which cite the education levels of their participants also indirectly indicate the high education level of this sample of middle-aged and elder women

(Beckman & Houser, 1982; Connidis & McMullin, 1992; DeGenova, 1992; Keith, 1983a, 1983b; Rempel, 1985). However, as high levels of education are typical of voluntarily childless women (Houseknecht, 1979; Krishan, 1979; Pol, 1983; Veevers, 1980), it was necessary to obtain equally well educated involuntarily childless women and mothers to control for possible education related confounds. Unfortunately, the highly educated nature of the participants makes generalization of these findings to the general population of elder women problematic.

Health and Depression

As was mentioned in the results section there were no significant group differences on measures of health or depression scores. What does bear mention, however, is that this sample was healthier than other Canadians over the age of 55. Of those women aged 55 and over who participated in this study, 42% rated their health as excellent and 55% rated their health as good. According to Statistics Canada (1986, as cited in Connidis & McMullin, 1993), of the general population of Canadians over 55, 20% rated their health as excellent and 44% rated their health as good. Connidis & McMullin (1993) in their sample of 678 individuals over 55, found that 30% rated their health as excellent and 46% rated it as good. The high health ratings of the women who participated in this study also needs to be borne in mind when attempting to generalize these findings to other groups of women.

Of the four women that scored above the cutoff of 23 for “probable” depression (Radloff & Teri, 1986), only two women scored significantly higher. One was a younger

involuntarily childless woman who scored 29 and one was an older mother who scored 30. However, neither of these women's responses to any of the measures was atypical. The 46 year old involuntarily childless woman who mentioned the most significant and strongest present regrets about not having children, stating that her life had no purpose without children, scored below the cutoff for probable depression with a score of 19.

Psychological Well-Being

In interpreting the psychological well-being results, present-self scores can be conceptualized as the score that is usually requested when an individual completes a psychological well-being questionnaire. The instructions for most measures of psychological well-being request that the individual think about how they have been thinking or feeling over a specified period of time. For the present-self ratings, the instructions were to complete the items relative to how the individual generally felt about themselves "in the present". Therefore, when interpreting these results one must keep in mind that the present-self ratings are comparable to results in other studies of psychological well-being.

The ideal-self scores, on the other hand, give an indication of how the individual woman would like to be functioning -- what she is "aiming for". The difference between the ideal score and the present score can then be conceptualized as how far the woman is from her ideal -- how congruent or incongruent the ratings of present- and ideal-selves are perceived to be for each woman.

Overall, measures of the various dimensions of psychological well-being did not indicate many differences between groups of voluntarily childless women, involuntarily childless women, and mothers; or between the middle-aged groups and the older groups. There were only two significant differences between groups on present-self ratings. On both autonomy and environmental mastery dimensions, the voluntarily childless women scored significantly higher than the involuntarily childless women.

That the voluntarily childless women would score significantly higher than the involuntarily childless on present ratings of autonomy was one of the research hypotheses. That these voluntarily childless women scored significantly higher on autonomy is commensurate with research on younger voluntarily childless women (Houseknecht, 1979b; Bram, 1985). The finding that voluntarily childless women are more autonomous makes intuitive sense given that they have actively rejected the norm of having children.

There was also a significant group by self rating interaction on the dimension of autonomy, indicating that the discrepancy between the voluntarily childless women's ratings of present- and ideal-selves was significantly smaller when compared to the involuntarily childless. It is interesting to note that ideal ratings of autonomy between the groups were very similar, indicating that voluntarily childless women, involuntarily childless women and mothers all had similar ideals for how autonomous they would have liked to be. However, the higher present-self ratings of the voluntarily childless women indicated that they were closer to their ideal on measures of autonomy than were the involuntarily childless women.

As was hypothesized, the involuntarily childless women had significantly lower scores than the voluntarily childless women on present ratings of environmental mastery. This result indicates that the involuntarily childless feel that they have less control over the external world and their own lives when compared to the voluntarily childless.

The only significant age effect was the presence of an age by self rating interaction on the dimension of self-acceptance, indicating that the discrepancy between present and ideal ratings of self-acceptance were significantly smaller for the older women. Thus, for the older group of women, their present ratings of self-acceptance were more congruent with their ideal ratings -- they were closer to their expectations.

At this point it bears mention that this study did not replicate many of the age differences that Ryff (1989b, 1991) reported. Ryff (1989b) found her older group of adults (mean age = 74.96) scored significantly lower than the middle aged group (mean age = 49.85) on present ratings of personal growth and purpose in life. In 1991, Ryff reported significant age differences on present-self ratings of personal growth, as well as ideal ratings of autonomy, environmental mastery, personal growth, purpose in life, and self-acceptance, with the older group of adults (mean age = 73.4) scoring significantly lower than the middle-aged group (mean age 46.0). None of these results were replicated here. As discussed, a significantly smaller discrepancy was found in the present study between the present- and ideal-self ratings of self-acceptance for the older group, which parallels Ryff's (1991) findings. Ryff (1989b, 1991) did not find any significant age differences on the dimension of positive relations with others, a result that was also replicated here. On all six dimensions of psychological well-being, both on present and

ideal ratings, the older women in the present study were not significantly different from the middle-aged women.

In summary, there were few group differences on the dimensions of psychological well-being. The voluntarily childless women scored higher than the involuntarily childless women on present ratings of autonomy and environmental mastery, and the voluntarily childless were more congruent with their ideal expectations on the dimension of autonomy. The only significant age difference was that the older women's present and ideal ratings were significantly more congruent on the dimension of self-acceptance.

Regrets Questionnaire

Initial Elicitation -- General Regrets

The only significant difference on the elicitation of general regrets was that the older women mentioned significantly fewer regrets than younger women. There were no significant group differences in the number of child-related regrets mentioned spontaneously on the general question.

If the three most frequently mentioned regret categories are examined for the whole sample, academic regrets are the most frequently cited (14.7%), followed by artistic pursuits (13.7%) and occupational regrets (9.6%). However, if the leisure, travel and artistic pursuits categories are combined into the original leisure category provided by Lecci et al. (1994), this becomes the most frequently cited category of regret (26%). In Lecci et al.'s (1994) study combined leisure regrets were mentioned less frequently (16.7%), and occupational regrets were mentioned more frequently (17.4%).

When the percentage of persons who mention academic related regrets is examined, this pattern of results is different from that obtained in previous studies, where academic regrets were mentioned by 31% (Lecci et al., 1994), 39% (Kinnier & Metha, 1989; Metha et al., 1989), or 71% (DeGenova, 1992) of various samples of participants. It is quite conceivable that the relatively low frequency of academic related regrets mentioned by this group of women was due to the highly educated nature of the participant sample. Also, when compared to Lecci et al. (1994) the increased frequency of leisure related regrets and decreased frequency of occupational regrets found in the present study may be the result of differences in the participant samples. All of the women in this study were either well into their career lives, approaching the end of their career lives, or retired, as opposed to being students at a community college, as were Lecci and colleague's participants. It makes sense that occupational regrets were less salient and leisure related regrets were more salient at this point in these women's lives. This is a speculative interpretation, however, and these results would need to be replicated.

Specific Elicitation of Child Related Regrets

When regrets around not having children were specifically queried, the involuntarily childless women mentioned significantly more regrets and disappointment that they did not have children than the voluntarily childless women. One voluntarily childless woman and one involuntarily childless woman regretted giving a baby up for adoption. In the interview, it was discovered that a total of 4 younger women in this study had had abortions, 2 involuntarily childless women and 2 voluntarily childless women, but

only one of the voluntarily childless women mentioned regret around having had an abortion on either the questionnaire or interview data. No age differences were apparent in the percentage of childless women who mentioned child-related regrets. Mothers were left out of this analysis as none of them regretted having their children.

It was expected that the significantly larger number of involuntarily childless women to mention child-related regrets would appear on the initial elicitation of regrets. However, this difference was not obtained until women were specifically queried about child-related regrets. It is quite likely, therefore, that while the involuntarily childless women did respond more frequently with child-related regrets after specifically being queried, these regrets were probably not important or large enough to be mentioned spontaneously.

In summary, patterns of general regrets obtained here were not similar to patterns found in other studies, rather than academic regrets ranking highest in frequency, a combined category of leisure related regrets ranked highest in frequency for both older and younger groups. It is possible that the high average educational achievement of these women, at least in part, explains why only 14.7% mentioned academic regrets, compared to values from 31% to 71% found in other studies. Significant age differences were obtained in the number of general regrets mentioned, with the older women reporting significantly fewer regrets. Unfortunately, due to the cross-sectional design of this study, it is not clear whether the older women have left some of their regrets behind them, or if this cohort of women had fewer general regrets to begin with. The original hypothesis, that the involuntarily childless women would spontaneously mention more child related

regrets than the voluntarily childless women was not supported. However, after a direct query for child-related regrets, the involuntarily childless women did mention significantly more regrets than the voluntarily childless women. In addition, the involuntarily childless women who did experience regret were significantly more disappointed about not having had children than the voluntarily childless women. There were no apparent age differences in frequency or ratings of child related regrets. None of the mothers regretted becoming mothers.

Semi-structured Interview

The information gathered in the semi-structured interview pertaining to why women did not have children replicated previous research. The reasons presented by the voluntarily childless women for not having children were similar to the reasons that were provided by early articulators and postponers (Houseknecht, 1977, 1979b; Veevers, 1980). Similar to the early articulators, 23% of the younger and 60% of the older voluntarily childless women had “never” desired to have children. Seventy seven percent of the younger and 40% of the older voluntarily childless women matched the description of the postponer. Thus, older voluntarily childless women were more likely to be early articulators, while younger voluntarily childless women were more likely to be postponers.

The involuntarily childless women, on the other hand, volunteered reasons for being childless that echoed much of the definition provided by Beckman and Houser (1982). The involuntarily childless women either: had problems getting pregnant or

carrying a pregnancy to term, were too old at age of marriage to have children, had husbands who were infertile, were prevented by marital difficulties, or were prevented by their single status. Most surprisingly was that only 12% of the entire sample of involuntarily childless women mentioned seeking infertility testing and only one of those woman, 4% of the entire sample, had sought treatment for the couple's infertility. It must be kept in mind, however, that no specific question asked the women if they had sought medical help for fertility problems, so it is possible that other women who had sought assistance did not mention it.

A very interesting finding in the interview data surfaced when the childless women were asked whether they were childless by choice or not by choice. As would be expected, all of the voluntarily childless women identified themselves as childless by choice. However, an unanticipated finding was that 43% of the younger and 30% of the older involuntarily childless women identified themselves as childless by choice.

Though categorization of women into voluntarily and involuntarily childless groups was performed in a manner that was commensurate with research on younger women (Houseknecht, 1977, 1979a, b; Morell, 1994; Veevers, 1975, 1980), and pre-existing research on older women (Beckman & Houser, 1982), these results indicate that this may not be a correct categorization of these women. It became clear in the interview that there were really two groups of involuntarily childless women in this study -- those that described themselves as childless by choice and those that described themselves as childless not by choice. The groups should probably have been divided based on whether the woman presently defined herself as childless by choice or not, rather than based on

decisions and behaviors in her past. Unfortunately too few involuntarily childless women could be recruited to permit separation of these groups for analysis, and the present sample was too small to permit these groups to be analyzed separately. It does seem, however, that the involuntarily childless women who describe themselves as childless by choice have made a decision at some point to embrace the childless lifestyle, become “voluntarily” childless, and move forward with their lives. These women experienced fewer regrets, and described them as minor or unimportant. The content of these women’s interviews was very similar to those of the voluntarily childless. It is also possible that these involuntarily childless women would score similarly to the voluntarily childless women and mothers on the dimensions of psychological well-being. This would need to be examined in future research.

On the other hand, the majority of involuntarily childless women (75% of the younger and 67% of the older involuntarily childless women) who identified themselves as childless not by choice did report regrets that they did not qualify as minor. In addition, one younger voluntarily childless woman (age 46) had started to experience intense regrets about not having children.

When questioned about how their regrets had changed over time, 30.8% of the younger and 70% of the older voluntarily childless women described their regrets about children as having faded over the years. Also, 57.1% of the younger and 40% of the older voluntarily childless women said they were even more convinced they had made the right decision by not having children. Finally, none of the older voluntarily childless women

described their regrets as becoming stronger over the years, whereas one younger voluntarily childless women did. Rather unfortunately, feelings of intense regret had only surfaced recently for one 46 year old voluntarily childless woman who could see no reason for her life because she had no children. The finding that a very small minority (4.3%, $n = 1$) of voluntarily childless women mentioned regrets increasing in strength over the years is in direct contradiction of Alexander et al.'s (1992) observation that a "common experience among our informants was that the intensity of the regret had increased with age" (p. 620, italics added for emphasis).

The involuntarily childless women were more ambivalent about the manner in which their regrets had changed over the years. One quarter of the involuntarily childless women said both that they were content with the way their lives had turned out and that they were still feeling regretful about not having children. Collapsing across the age groups, a total of 37.5% of the involuntarily childless women said that they had developed feelings of regret recently or that their feelings of regret had gotten stronger. This finding is more consistent with the results obtained by Alexander et al.(1992), strengthening the suggestion that Alexander et al.'s sample mixed a minority of voluntarily childless women with a majority of involuntarily childless women. However, at the same time, a total of 50% of the involuntarily childless women in this study said they were content with the way their lives had turned out.

In summary, the majority of voluntarily childless women in both age groups did not experience child-related regrets, and when they did experience regrets they were

described as minor, fleeting, and decreasing in intensity with time. These results were echoed by the majority of involuntarily childless women who identified themselves as childless by choice. As well, the vast majority of voluntarily childless women said either that feelings of regret had decreased over the years, or that they were even more convinced that they had made the correct decision in not having children. These results send a positive message to women who are still within their fertile years and deciding not to have children. It also sends a positive message to women who cannot have children, that embracing the inevitability of a childless life will permit them to feel more content in their middle and later years. It is possible for both the voluntarily childless woman, and the involuntarily childless woman who sees herself as childless by choice, to be content in their mature years.

The results were not so optimistic for the involuntarily childless women who saw themselves as childless not by choice, however, as the majority of these women were experiencing regrets about not having children. As well, of all the involuntarily childless women, a significant minority of 37.5% said their regrets had either developed recently or were increasing in intensity as they got older. Less than 5% of the voluntarily childless women said the same.

Theoretical Implications

It is apparent from the results of this study that the voluntarily childless women, and the involuntarily childless women who saw themselves as childless by choice, were quite different from what pronatalist biases would predict. It was also apparent that the

older voluntarily childless women were more settled and more satisfied with their life courses than were their younger counterparts. They were able to look back on their lives with some satisfaction, and felt that they were pleased with the way their lives had gone. These older women were on their way to resolving the crisis of ego-integrity versus despair.

The involuntarily childless were more similar to what pronatalist biases would predict. Psychological well-being was adversely affected on dimensions of autonomy and environmental mastery. In addition, younger and older involuntarily childless women who saw themselves as childless not by choice demonstrated a pattern of regret, and regret strengthening with age. There was little satisfaction for these women about how their lives had gone. Therefore, it is quite obvious that women have very different experiences around being childless, based on whether they are childless by choice or not.

There are important theoretical implications here, many of which revolve around the issue of choice for the childless woman. As discussed earlier, many life span theories of adult development ignore the experiences and development of childless women. Yet, many of the women in this study are psychologically healthy and satisfied with their lives indicating that, though theory does not describe their lives, they are developing into healthy old age.

The implications of choice will be briefly applied to two of the major adult life-span developmental theories discussed earlier. First, Neugarten's theory of "off-time" events causing distress in an individual's life does not take into account the fact that some

adults might choose not to participate in the events that are considered by society to be “normal”. The woman who chooses not to have children, while she might view herself as “out of step” with her age peers, would not be distressed by not having children of her own. However, the involuntarily childless woman who sees herself as childless not by choice would see her childlessness as “non-normal” and therefore distressing. Only the experience of the woman who is childless not by choice is captured by Neugarten’s theory as it stands, not the experience of the woman who is childless by choice.

Second, while Erik Erikson’s stages of psychosocial development has been one of the more highly influential adult life-span developmental theories, it too ignores the experience of the woman who is childless by choice. Notwithstanding that nonparental indices of generativity exist, it is also apparent from the responses of the women who are childless by choice that they are in no danger of slipping into despair in old age. Rather, these women who are childless by choice, both middle-aged and older, are in the main well satisfied with their lives. For the older voluntarily childless women this sense of satisfaction is more apparent -- a sense of ego-integrity is already developing. Only one middle-aged woman demonstrated that she is sinking into despair. It remains to be seen if this will change for her with time.

The issue of choice could also be conceptualized as an issue of control. Perhaps the women who identify themselves as childless by choice have a more internal locus of control, thus they perceive that they are in control of their own lives, and that they are responsible for their choices and results in life. In fact, examination of the items on the

Autonomy and Environmental Mastery dimensions of the psychological well-being measure, on which the voluntarily childless women scored significantly higher than the involuntarily childless women, indicates that the voluntarily childless women may indeed possess a more internally focused locus of control. Since an internal locus of control has been found to correlate with increased levels of personal adjustment (Burger, 1993), it may indeed be related to lower levels of regret, though it would appear that this has yet to be examined. The notion that women childless by choice have a more internal locus of control, leading to decreased experience of regret, would need to be examined more directly in subsequent research.

It would appear then, even with this brief discussion, that adult development can and should be conceptualized separately from parenthood and parental tasks, at least for the childless by choice. This raises the more general question: If children are not a requirement for successful adult development in women childless by choice, what are the developmental tasks of adulthood? Have the developmental tasks of adulthood, at least for women, been confounded with the fact that most women have children? Perhaps a closer examination of the successful and unsuccessful adult development of childless women will inform theory for all women, regardless of whether she has children or not.

Limitations of the Study

Finally, five limitations of this research need to be mentioned. First, the sample was small, with only 72 participants and these participants were highly educated and healthy. None of these women have had their social supports tested. A second limitation,

related to the first, was that obtaining a sizable sample of middle-aged and older voluntarily and involuntarily childless women was extremely difficult. Advertising resulted in a self selected sample of participants and, in addition, snowball sampling techniques needed to be used to gain the participation of more women. Therefore, it is difficult to ascertain if there are differences between the voluntarily childless women, involuntarily childless women and mothers that agreed to participate in the study and those who did not. Third, it is unlikely that highly distressed involuntarily childless women will have participated in the research. The researcher received inquiry calls from two involuntarily childless women aged 45 and 46 who declined over the phone to participate saying the questions about childlessness would be too painful for them. In addition, one of the older involuntarily childless women also commented that five years previously she would not have volunteered for such a study as her feelings about losing a baby close to term were still too raw and painful. Therefore the results of this study cannot be generalized beyond highly educated, healthy women, nor can it be generalized to all involuntarily childless women.

The fourth limitation revolves around starting the study with hypotheses that anticipated non-significant differences between voluntarily childless women and mothers on measures of psychological well-being and regret. While it is tempting to interpret non-significant differences as indicating that voluntarily childless women are equivalent to mothers on these measures, this is incorrect statistical logic. The only interpretation that can be made is that the hypothesis of no difference between voluntarily childless women

and mothers could not be rejected. Finally, the cross-sectional nature of this study makes it difficult to ascertain if the age differences that were found on the number and strength of child-related regrets are cohort effects, or if they are truly due to the development of a sense of ego-integrity. A longitudinal study would need to follow the younger women into their senior years to see if they, too, experience fewer regrets as life goes on.

Future Directions

The separation of involuntarily childless women into groups based on whether they define themselves as childless by choice or not by choice is new to the literature and raises many questions for future research. What is it about these women that prompts them to decide to embrace the childless lifestyle and move on with their lives when other involuntarily childless women appear not to do so? Is it due, at least in part, to these women who are childless by choice having a more internal locus of control? Are there implications for clinical practice with involuntarily childless women who present for fertility interventions? In fact, why did so few women seek infertility testing and interventions, and is this true of other involuntarily childless women? Also, as was demonstrated in this study, the distinction of whether middle-aged and older childless women are voluntarily or involuntarily childless is important when studying psychological well-being and child-related regrets and should be taken into account in future research endeavors. Finally, what are the developmental tasks of adulthood for women, separate from the experience of motherhood? All of these are questions for future research.

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Appendix A -- Psychological Well-Being Scale -- Short Form (Ryff, 1995, personal communication)

Autonomy

1. Sometimes I change the way I act or think to be more like those around me.
2. I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people.
3. My decisions are not usually influenced by what everyone else is doing.
4. I tend to worry about what other people think of me.
5. Being happy with myself is more important to me than having others approve of me.
6. I tend to be influenced by people with strong opinions.
7. People rarely talk me into doing things I don't want to do.
8. It is more important to me to "fit in" with others than to stand alone on my principles.
9. I have confidence in my own opinions, even if they are contrary to the general consensus.
10. It's difficult for me to voice my own opinions on controversial matters.
11. I often change my mind about decisions if my friends or family disagree.
12. I am not the kind of person who gives in to social pressure to think or act in certain ways.
13. I am concerned about how other people evaluate the choices I have made in my life.
14. I judge myself by what I think is important, not by the values of what others think is important.

Appendix A -- Psychological Well-Being Scale -- Short Form (Ryff, 1995, personal communication)

Environmental Mastery

1. In general, I feel I am in charge of the situations in which I live.
2. The demands of everyday life often get me down.
3. I do not fit very well with the people and the community around me.
4. I am quite good at managing the many responsibilities of my daily life.
5. I often feel overwhelmed by my responsibilities.
6. If I were unhappy with my living situation, I would take effective steps to change it.
7. I generally do a good job of taking care of my personal finances & affairs.
8. I find it stressful that I can't keep up with all of the things I have to do eachday.
9. I am good at juggling my time so that I can fit everything in that needs to get done.
10. My daily life is busy, but I derive a sense of satisfaction from keeping up with everything.
11. I get frustrated when trying to plan my daily activities because I never accomplish the things I set out to do.
12. My efforts to find the kinds of activities and relationships that I need have been quite successful.
13. I have difficulty arranging my life in a way that is satisfying to me.
14. I have been able to build a home and a lifestyle for myself that is much to my liking.

Appendix A -- Psychological Well-Being Scale -- Short Form (Ryff, 1995, personal communication)

Personal Growth

1. I am not interested in activities that will expand my horizons.
2. In general, I feel that I continue to learn more about myself as time goes by.
3. I am the kind of person who likes to give new things a try.
4. I don't want to try new ways of doing things -- my life is fine the way it is.
5. I think it is important to have new experiences that challenge how you think about yourself and the world.
6. When I think about it, I haven't really improved much as a person over the years.
7. In my view, people of every age are able to continue growing and developing.
8. With time, I have gained a lot of insight about life that has made me a stronger, more capable person.
9. I have the sense that I have developed a lot as a person over time.
10. I do not enjoy being in new situations that require me to change my old familiar ways of doing things.
11. For me, life has been a continuous process of learning, changing, and growth.
12. I enjoy seeing how my views have changed and matured over the years.
13. I gave up trying to make big improvements or changes in my life a long time ago.
14. There is truth to the saying you can't teach an old dog new tricks.

Appendix A -- Psychological Well-Being Scale -- Short Form (Ryff, 1995, personal communication)

Positive Relations with Others

1. Most people see me as loving and affectionate.
2. Maintaining close relationships has been difficult and frustrating for me.
3. I often feel lonely because I have few close friends with whom to share my concerns.
4. I enjoy personal and mutual conversations with family members or friends.
5. It is important to me to be a good listener when close friends talk to me about their problems.
6. I don't have many people who want to listen when I need to talk.
7. I feel like I get a lot out of my friendships.
8. It seems to me that most other people have more friends than I do.
9. People would describe me as a giving person, willing to share my time with others.
10. I have not experienced many warm and trusting relationships with others.
11. I often feel like I'm on the outside looking in when it comes to friendships.
12. I know that I can trust my friends, and they know they can trust me.
13. I find it difficult to really open up when I talk to others.
14. My friends and I sympathize with each others' problems.

Appendix A -- Psychological Well-Being Scale -- Short Form (Ryff, 1995, personal communication)

Purpose in Life

1. I feel good when I think of what I've done in the past and what I hope to do in the future.
2. I live life one day at a time and don't really think about the future.
3. I tend to focus on the present, because the future nearly always brings me problems.
4. I have a sense of direction and purpose in life.
5. My daily activities often seem trivial and unimportant to me.
6. I don't have a good sense of what it is I'm trying to accomplish in life.
7. I used to set goals for myself, but that now seems like a waste of time.
8. I enjoy making plans for the future and working to make them a reality.
9. I am an active person in carrying out the plans I set for myself.
10. Some people wander aimlessly through life, but I am not one of them.
11. I sometimes feel as if I've done all there is to do in life.
12. My aims in life have been more a source of satisfaction than frustration to me.
13. I find it satisfying to think about what I have accomplished in life.
14. In the final analysis, I'm not so sure that my life adds up to much.

Appendix A -- Psychological Well-Being Scale -- Short Form (Ryff, 1995, personal communication)

Self-Acceptance

1. When I look at the story of my life, I am pleased with how things have turned out.
2. In general, I feel confident and positive about myself.
3. I feel like many of the people I know have gotten more out of life than I have.
4. Given the opportunity, there are many things about myself that I would change.
5. I like most aspects of my personality.
6. I made some mistakes in the past, but I feel that all in all everything has worked out for the best.
7. In many ways, I feel disappointed about my achievements in life.
8. For the most part, I am proud of who I am and the life I lead.
9. I envy many people for the lives they lead.
10. My attitude about myself is probably not as positive as most people feel about themselves.
11. Many days I wake up feeling discouraged about how I have lived my life.
12. The past had it's ups and downs, but in general, I wouldn't want to change it.
13. When I compare myself to friends and acquaintances, it makes me feel good about who I am.
14. Everyone has their weaknesses, but I seem to have more than my share.

Appendix A -- Possible Selves Instructions

Present Possible Selves Instructions

Please answer the questions on this first questionnaire in relation to how you generally feel about yourself in the present. Some of the statements you will agree with and others you will disagree with. I would like you to tell me how much you agree or disagree with each statement, going from a 1 for Strongly Disagree to a 6 for Strongly Agree.

Present Possible Selves

Please indicate your present agreement or disagreement with each statement.

Strongly disagree

Strongly agree

1

2

3

4

5

6

Appendix A -- Possible Selves Instructions

Ideal Possible Selves Instructions

I would now like you to answer these same questions again, but this time I would like you to answer them based on the person you would most like to be. To get us thinking about who you would ideally like to be let's think about these questions

- What personal qualities would you most like to have?
- How would you like to change yourself?
- What would you like to be doing with your life?
- What goals or dreams about yourself do you want to come true?

Now please tell me how much you agree or disagree with each statement based on the person you would most like to be, again going from 1 for Strongly Disagree to 6 for Strongly Agree.

Ideal Possible Self

Please answer each question in terms of the person you would most like to be -- your ideal self.

Strongly disagree

Strongly agree

1

2

3

4

5

6

Appendix B -- Demographic Questionnaire

Please remember to answer only those questions you are willing to answer: Participation is completely voluntary.

1. Age: _____.
2. Marital Status: Single ____, Married ____, Divorced ____, Widowed ____,
Common Law ____.

Have you ever been married or divorced before? Yes ____ No ____.

If yes, how many times ____.

3. Are you presently in a committed relationship? Yes ____ No ____.

If yes, how long? ____.

4. Do you have children? Yes ____, No ____.

Number of Boys _____ Ages _____

Number of Girls _____ Ages _____

Ethnic Background: _____

5. Religious background during childhood: _____ or none ____

Present religion, if different from that in which you were raised: _____

Did you, as a child, regularly attend a place of worship? Yes ____ No ____.

Do you, now, regularly attend a place of worship? Yes ____ No ____.

Appendix B -- Demographic Questionnaire

6. Educational Background: Please indicate the highest institution completed.
Grade School __, High School __, Trade School __, College __,
some University __, Bachelor Degree __, Masters Degree __,
Ph.D. __, Professional Degree __.
7. Occupation: _____.
8. Spouse's Occupation: _____.
9. How would you rate your present health?
excellent __, good __, fair __, poor __.
10. Family of Origin:
Number of brothers __ and sisters __.
Where are you in the birth order: _____
Other individuals living with your family for extended periods (please indicate how many): None __, Grandparent(s) __, Aunts or Uncles __, Cousins __, Foster brothers or sisters __, Step brothers or sisters __.

Appendix B -- Demographic Questionnaire

11. Parental Educational Background: Please indicate the highest institution completed.

Father: Grade School __, High School __, Trade School __,

College __, some University __, Bachelor Degree __, Masters __,

PhD __, Professional Degree __.

Mother: Grade School __, High School __, Trade School __,

College __, some University __, Bachelor Degree __, Masters __,

Ph.D. __, Professional Degree __.

Father's Occupation: _____.

Mother's Occupation: _____.

12. Parental Marital Status: Married, never divorced __, Married & divorced __,
Never Married __, Common Law __, Common Law & separated __.

Appendix C -- Center for Epidemiological Studies -- Depression (CES-D) Scale

Below is a list of the ways you might have felt or behaved recently. Please tell me how often you have felt this way during the past week.

1	2	3	4
Rarely or none of the time (less than 1 day)	Some or a little of the time (1-2 days)	occasionally or a moderate amount of time (3-4 days)	most or all of the time (5-7 days)

During the last week:

- 1) _____ I was bothered by things that usually don't bother me.
- 2) _____ I did not feel like eating; my appetite was poor.
- 3) _____ I felt that I could not shake off the blues even with help from my family or friends.
- 4) _____ I felt that I was just as good as other people.
- 5) _____ I had trouble keeping my mind on what I was doing.
- 6) _____ I felt depressed.
- 7) _____ I felt that everything I did was an effort.
- 8) _____ I felt hopeful about the future.
- 9) _____ I thought my life had been a failure.
- 10) _____ I felt fearful.
- 11) _____ My sleep was restless.

Appendix C -- Center for Epidemiological Studies -- Depression (CES-D) Scale

- 12) _____ I was happy.
- 13) _____ I talked less than usual.
- 14) _____ I felt lonely.
- 15) _____ People were unfriendly.
- 16) _____ I enjoyed life.
- 17) _____ I had crying spells.
- 18) _____ I felt sad.
- 19) _____ I felt that people dislike me.
- 20) _____ I could not get "going."

Appendix D -- Regret Questionnaire (Lecci et al., personal communication, 1995)

Regrets

We are interested in knowing about a certain kind of personal goal, the unfulfilled or unattained goal, and about the various ways you think about these unfulfilled goals. Broadly speaking, unfulfilled goals represent important aims you have had in your life -- the outcomes you wished or sincerely hoped to have gotten at some point in time. All of us usually have a number of unattained goals that we may be thinking about.

We would like you to list some of the goals that you *wished* you had pursued, but never did. For example, you may now wish that you had married your high school sweetheart, or pursued athletics more seriously when you were a child. You may have only thought about some of them recently. Please list these unattained or unfulfilled goals (or what we call "regrets") in column one, below.

#1 REGRETS	#2 ORDER OF IMPORTANCE	#3 WISH I COULD CHANGE IT
1) _____	_____	_____
2) _____	_____	_____
3) _____	_____	_____
4) _____	_____	_____
5) _____	_____	_____
6) _____	_____	_____

Appendix D -- Regret Questionnaire (Lecci et al., personal communication, 1995)

#1 REGRETS	#2 ORDER OF IMPORTANCE	#3 WISH I COULD CHANGE IT
7) _____	_____	_____
8) _____	_____	_____
9) _____	_____	_____
10) _____	_____	_____

Now take a moment to rank order those regrets you have listed. Please enter 1 for the most important regret in column two, 2 for the second most important regret, etc. If some are equally important, you may assign the same number to more than one regret.

After you have indicated how important each regret is in comparison to the others, please place a check mark in column three to indicate which regrets you would like to change if you could. Indicate only those that are important enough to you for you to wish that they could have been different.

Appendix D -- Regret Questionnaire (Lecci et al., personal communication, 1995)

Now take a moment to enter your most important regret in the blank below

#1 Most Important Regret

Age when you
could have
done it.

Age when you
began to regret
not doing it.

We would now like you to tell us a little more about your most important regret by rating it on the following dimensions:

Note: The term "goal" will be used in the definitions to follow, but for these ratings we are referring to your most important regret.

1. Importance: How important is it to you that you were not able to pursue this goal?
Use 10 if it is very important and zero if it is not at all important.

not important										very important	
0	1	2	3	4	5	6	7	8	9	10	NA

2. Distress: To what extent does the fact that you were not able to pursue this goal causing you to feel distressed? Use 10 if you are very distressed and zero if it is not distressing you at all.

not important										very important	
0	1	2	3	4	5	6	7	8	9	10	NA

3. Difficulty: How difficult is it for you to keep yourself from engaging in this goal? Use 10 if it is very difficult and zero if it is not at all difficult.

not important										very important	
0	1	2	3	4	5	6	7	8	9	10	NA

4. Progress: How much had you progressed on this goal when you stopped? Use 10 if you had almost achieved it and use 0 if you had spent no time at all on it.

not important										very important	
0	1	2	3	4	5	6	7	8	9	10	NA

5. Control: To what extent was it our own decision to not work on this goal? Use 10 if you had full control and use zero if you had to stop for reasons completely out of your control.

not important										very important	
0	1	2	3	4	5	6	7	8	9	10	NA

Appendix D -- Regret Questionnaire (Lecci et al., personal communication, 1995)

6. Disappointment: How disappointed are you that you didn't pursue this goal now? Use 10 if you are very disappointed and 0 if you are not disappointed at all.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

7. Impactfulness: What has been the impact for you of not having pursued this goal now? Use 10 if this has had a great impact on your life and use 0 if it has had virtually no impact at all.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

8. Other's view of importance: To what extent do the important people in your life consider this goal important? Use 10 if they consider it to be very important and 0 if they don't consider it important at all.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

9. Hindrance: To what extent did the important people in your life block you or discourage you from pursuing this goal? Use 10 if they blocked or discouraged you very much and 0 if not at all.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

10. Desirability: Is this goal something that was desirable or undesirable? Use 10 if it was something very desirable and use 0 if it was something very undesirable.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

11. Conflict: To what extent have thoughts and feelings about this goal conflicted with your *current* goals? Use 10 if there has been a great deal of conflict and use 0 if there has been no conflict at all.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

12. Investment: How much did you invest yourself (time and energy) into this goal? Use 10 if you had invested a great deal and use zero if you had not invested of yourself at all.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

Appendix D -- Regret Questionnaire (Lecci et al., personal communication, 1995)

13. Outcome: How likely is it that you would have achieved this goal if you had pursued it? Use 10 if you believe that this goal would have worked out exactly as you had planned (if you had worked on it) and use 0 to indicate that you don't think the goal would have worked out as well.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

14. Temporary vs. Precluded: Is this goal truly precluded from ever happening or has it just been temporarily put off? Use 10 if it has been completely precluded and use 0 if you are sure that you will at some point actually pursue it (use 5 to indicate that you have no idea).

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

Now take a moment to write your most important regret related to having or not having children, if you have a regret in this area, in the blank below. If you did not list a regret related to having or not having children, can you list one now?

**#1 Most Important Regret
related to having or not having
children**

Age when you
could have
done it.

Age when you
began to regret
not doing it.

We would now like you to tell us a little more about your most important regret related to having or not having children, by rating it on the following dimensions:

1. Importance: How important is it to you that you were not able to pursue this goal? Use 10 if it is very important and zero if it is not at all important.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

2. Distress: To what extent does the fact that you were not able to pursue this goal causing you to feel distressed? Use 10 if you are very distressed and zero if it is not distressing you at all.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

Appendix D -- Regret Questionnaire (Lecci et al., personal communication, 1995)

3. Difficulty: How difficult is it for you to keep yourself from engaging in this goal? Use 10 if it is very difficult and zero if it is not at all difficult.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

4. Progress: How much had you progressed on this goal when you stopped? Use 10 if you had almost achieved it and use 0 if you had spent no time at all on it.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

5. Control: To what extent was it our own decision to not work on this goal? Use 10 if you had full control and use zero if you had to stop for reasons completely out of your control.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

6. Disappointment: How disappointed are you that you didn't pursue this goal now? Use 10 if you are very disappointed and 0 if you are not disappointed at all.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

7. Impactfulness: What has been the impact for you of not having pursued this goal now? Use 10 if this has had a great impact on your life and use 0 if it has had virtually no impact at all.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

8. Other's view of importance: To what extent do the important people in your life consider this goal important? Use 10 if they consider it to be very important and 0 if they don't consider it important at all.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

9. Hindrance: To what extent did the important people in your life block you or discourage you from pursuing this goal? Use 10 if they blocked or discouraged you very much and 0 if not at all.

not important									very important		
0	1	2	3	4	5	6	7	8	9	10	NA

Appendix D -- Regret Questionnaire (Lecci et al., personal communication, 1995)

10. Desirability: Is this goal something that was desirable or undesirable? Use 10 if it was something very desirable and use 0 if it was something very undesirable.

not important **very important**
 0 1 2 3 4 5 6 7 8 9 10 NA

11. Conflict: To what extent have thoughts and feelings about this goal conflicted with your *current* goals? Use 10 if there has been a great deal of conflict and use 0 if there has been no conflict at all.

not important **very important**
 0 1 2 3 4 5 6 7 8 9 10 NA

12. Investment: How much did you invest yourself (time and energy) into this goal? Use 10 if you had invested a great deal and use zero if you had not invested of yourself at all.

not important **very important**
 0 1 2 3 4 5 6 7 8 9 10 NA

13. Outcome: How likely is it that you would have achieved this goal if you had pursued it? Use 10 if you believe that this goal would have worked out exactly as you had planned (if you had worked on it) and use 0 to indicate that you don't think the goal would have worked out as well.

not important **very important**
 0 1 2 3 4 5 6 7 8 9 10 NA

14. Temporary vs. Precluded: Is this goal truly precluded from ever happening or has it just been temporarily put off? Use 10 if it has been completely precluded and use 0 if you are sure that you will at some point actually pursue it (use 5 to indicate that you have no idea).

not important **very important**
 0 1 2 3 4 5 6 7 8 9 10 NA

Appendix E -- Semi - structured interview

We will now turn the tape recorder on. It can be turned off at any time if necessary.

- 1) Would you consider yourself to be a mother / childless by choice or not by choice?
 - How so?
- 2) were you in control, in some way, of having / not having children
 - was that important to you - having or not having control?
 - if you had complete control would you have chosen differently, do you think?
- 3) Why did you want to have / not have children?
- 4) How did you make the decision?
 - Was anyone else involved in the decision?
- 5) I see you mentioned (or I see you didn't mention any) regrets about having or not having children.
 - Can you tell me about that (Has there ever been a time when you have regretted having / not having children)? When? Why? / Why not?
- 6) Have you ever felt strongly enough about it that you would like to change it if you could go back and have the power to do so? Why? / Why not?
- 7) What do you think the main benefits have been to having / not having children?

Appendix E -- Semi - structured interview

1. What do you think the main shortcoming have been to having / not having children?
2. Have your feelings about having / not having children changed as you have gotten older?
3. Do you think, as you get older, that your feelings may change?
4. How have others reacted to your having / not having children? Probe -- who?
 - a) Did you feel any social pressures?
 - b) Was it hard to be childless in your day? How was it hard?
5. Did you have aspirations for a career? What were they?
 - a) Was that important to you - to have a career?
6. Did you think that it was possible for a woman to have a career AND children in your day?
 - a) If no, what if it had been?
7. Do you think having children is important to a woman's life course? Why or why not.
 - a) How do you define "family" -- are children necessary to make a family?
Why?

Appendix F -- Modified Content Coding Manual for Regret Questionnaire (based on Lecci et al., personal communication, 1995)

CONTENT CATEGORIES FOR REGRETS MEASURE

based on Lecci et al. (1994), with the following changes -

1. all regrets related to having or not having children moved from “family” (coded 3) to “children” (coded 12)
2. two more categories added -
 - travel (coded 13)
 - artistic pursuits (coded 14)
3. code hobbies under Leisure (coded 10)

- 1) **Academic** (school related) - regrets involving attendance, failure to attend, performance, lack of effort, etc. (e.g., regret dropping out of school, not taking school seriously, not selecting a different major, etc.)
- 2) **Occupational** - regrets involving current or past jobs, vocational training, employment opportunities for the future, or lack thereof, etc. (e.g., regret not having taken another job, finding more fulfilling job, not asking for a raise, etc.)
- 3) **Family** (blood relatives) - regrets involving your family, not including your children (e.g., not having spent more time with parents, not telling parents I love them, not listening to my parents, regrets related to siblings, etc.)
- 4) **Intimate relationships** - regrets involving your past or present intimate partner(s), or other individuals who could have been your mate (e.g., regret not marrying/dating someone else, marrying/dating current mate, having been divorced/stopped dating, not working harder on intimate relationship, not saving or saving virginity, etc.)
- 5) **Friendships** - regrets involving relationships with friends and associates, past and present (e.g., regret not having or having pursued a friendship, not having more friends, etc.)
- 6) **Spiritual/Religious** - regrets involving spiritual/religious beliefs and practices, and any nonspecific references to moral or ethical violations (e.g., regret not having gotten closer to God, not having gone to church more often, having sinned, having cheated or lied, not being more honest, etc.)

NOTE: If there is a specific reference (e.g., cheating on my wife), then this would be categorised according to the specific reference (i.e., intimate relations).

Appendix F -- Modified Content Coding Manual for Regret Questionnaire (based on Lecci et al., personal communication, 1995)

- 7) **Health/Self-care** - regrets involving the past or present maintenance or failure to maintain/achieve a particular lifestyle or level of health (e.g., regret (not) having exercised, dieted, having used drugs or alcohol, not having paid more attention to my health, having had or not had a medical procedure (excluding abortion, sterilisation, etc. which are to be placed in #12))
- 8) **Self/Trait** - regrets involving self improvement or change at a psychological level (e.g., regret not having been more assertive, being too conservative, not being friendlier, etc.)
- 9) **Financial** - regrets involving not having enough money or not having used it properly (e.g., regret not having saved more money, having spent it, not having made more, being in debt, having or not having invested it, etc.)
- 10) **Leisure** - regrets involving the participation, or failure to participate, in leisure or recreational activities, or hobbies (e.g., regret not having done more fun things, wasting too much time on athletics, etc.). **DO NOT INCLUDE TRAVEL RELATED REGRETS OR ARTISTIC REGRETS**
- 11) **Temporal** - any regret involving a general statement about unspecified time wasted (e.g., I regret having wasted so much time)
- 12) **Children** - any regrets involving having or not having children, parenting those children, having an abortion, undergoing sterilisation, giving up a child for adoption, etc.
- 13) **Travel** - any regrets involving travelling or not travelling, or having spent more or less time abroad (unless work specifically mentioned - then code under occupational).
- 14) **Artistic Pursuits** - any regrets involving the arts, unless making a career of the arts is specifically mentioned, then code under occupational. (e.g., regret not pursuing piano, not learning to draw, learning an instrument)
- 15) **Other** - any regret that does not fall into any of the categories listed.

Appendix F -- Modified Content Coding Manual for Regret Questionnaire (based on Lecci et al., personal communication, 1995)

NOTE: If any regrets have dual codings, code only the dominant code (e.g., I regret not making more money at work - code under financial; regret not having the courage to try a new/different career - code under occupational)