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SPOUSAL VARIABLES AS PREDICTORS OF WELL-BEING IN OLDER COUPLES: DIFFERENCES BETWEEN HUSBANDS AND WIVES

Cécile Quirouette

A Thesis

in

The Department

of

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Concordia University
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ABSTRACT

Spousal variables as predictors of well-being in older couples: differences between husbands and wives

Cécile Quirouette
Concordia University, 1990

This study examined relations between spousal variables and the psychological well-being of older married men and women. It was hypothesized that spousal characteristics would be more important determinants of well-being for wives than for husbands. The relative contribution of each spousal variable to husbands' and wives' well-being and the association between couple similarity and well-being of spouses was examined. Eighty-five older couples completed standardized self-report measures and a short interview. The variables under investigation included education, verbal intelligence, personality, physical health, marital adjustment and psychological well-being. Response bias due to general social desirability and marital defensiveness was statistically controlled. The results of multiple regression analyses showed that spousal variables significantly predicted wives' well-being, with the three most influential predictor variables being the husbands' perception of the marriage, positive dimension of well-being and physical health. Similarity between spouses in marital adjustment and verbal intelligence also significantly predicted wives' well-being. In contrast, neither spousal variables nor couple similarity significantly predicted husbands' well-being. The study provides strong support for the hypothesis of differential responsiveness of men and women to spousal variables and highlights the importance of marital adjustment for the psychological well-being of older wives.

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SPOUSAL VARIABLES AS PREDICTORS OF WELL-BEING IN OLDER COUPLES: DIFFERENCES BETWEEN HUSBANDS AND WIVES

The purpose of the present study was to examine the relations between the characteristics of one spouse and the other spouse's psychological well-being in late-life, long-term marriages. More specifically, the first goal was to test the hypothesis that the well-being of older married women is more strongly influenced by spousal characteristics than is the well-being of older married men. This hypothesis was rooted in the explanations, offered by sex-role theorists, of differences in the physical and mental health of married men and women, which consistently favor men. The hypothesis was also based on existing empirical data. The second goal was to assess the relative importance of selected spousal variables, i.e., education, verbal intelligence, personality dimensions, physical health, and levels of marital and global happiness, as predictors of the psychological well-being of the marital partner. This endeavor was exploratory in nature since no prior systematic research has been conducted to address this question. Finally, to further test the hypothesis of differential responsiveness of married men and women to spousal variables, this study examined the relations between couple similarity and husbands' and wives' well-being, again assessing the relative importance of the selected variables.

Differences in the psychological well-being of married men and women

Married men and women have been reported to be in better mental health than never-married, widowed and divorced men and women (Gove,

Hughes & Styles, 1983). However, the positive association between marriage and mental health has repeatedly been shown to be more salient for men than for women, i.e, married men are in better mental health than are married women and unmarried men are in poorer mental health than are unmarried women (Gove & Tudor, 1973; Himmelfarb, 1984). Taillefer (1987) conducted an analysis of the rates of admissions (N = 6,796) in psychiatric hospitals in Montreal, between 1971 and 1976. The results showed that the overall rate of hospitalisation was higher for women than for men, but that this finding was due primarily to the difference in the mental health of married persons, with married women having the highest rates of admissions. In contrast, the rates of hospitalization of single women were lower than those of single men.

After reviewing the literature on the relationship between depression and marital distress, Gotlib & Hooley (1988) reported findings consistent with Taillefer's results. Their review of epidemiological investigations showed that women in general were 1.6 to 3 times more likely to be depressed than were men and that married women were particularly at risk relative to their unmarried counterparts. In addition, these authors found pervasive evidence of an association between depression and marital disturbance. This implies a possible explanation of the gender differences in mental health: it may be that married women are more sensitive than are married men to the quality of their marriage and that women experience less marital happiness than do men.

Indeed, there is empirical evidence in support of the latter hypotheses. Several studies have found that women tend to be less

satisfied than are men with their marriage (Akiyama & Antonucci, in press; Argyle & Furnham, 1983; Depner & Ingersoll-Dayton, 1985; Weishaus & Field, 1988). Furthermore, Gove et al. (1983), who obtained data from a national sample of 1,225 married people, reported that marital satisfaction was a stronger predictor of mental health for women than for men. Findings regarding gender differences in levels of marital satisfaction are however inconsistent. Glen & Weaver (1981), for example, do not report any gender differences in their analyses of data collected from 1,500 married people.

Researchers nevertheless do agree that marital happiness, rather than marital status itself, is the important factor in global well-being. When compared to other sources of satisfaction, marital satisfaction has been shown in large-scale social surveys to be by far the best predictor of mental health and global happiness for both married men and women (Glen & Weaver, 1981; Gove, Hughes, & Styles, 1983). Marital happiness uniquely explains between 25 and 39% of the variance in measures of psychological well-being. A happy marriage is virtually necessary for a high level of global happiness for married people.

Thus, in studies of risk factors for depression, as well as in large-scale social surveys and other empirical investigations, marriage and the perceived quality of the marital relation are significantly associated with the mental health of men and women. There is evidence that men benefit more than women from marriage, but that the quality of the marriage is particularly important for women's well-being.

Differences in the physical health of married men and women.

After marital satisfaction, physical health is the second strongest predictor of global happiness for married men and the third strongest predictor (after family life satisfaction) for married women (Glen & Weaver, 1981). The data on differences in the health status of older men and women are, however, complex and sometimes appear paradoxical: despite the higher death rates of men, women appear in some studies to be less healthy than men are. For example, recent data from the Boston Normative Aging Study showed that in a sample of 1,036 middle-aged and older married couples, the women reported more symptoms and signs of physical illness than did the men (Rose & Lenzer, 1988). The apparent contradiction in the sex-related differences in mortality and morbidity rates may be explained on one hand by women's greater tendency to monitor their health and men's tendency to deny their symptoms (Maddox & Douglass, cited in Turner, 1982), and on the other hand, by the nature of their specific disorders. Indeed, a study by Verbrugge (cited in Turner, 1982) showed that elderly women have higher rates of mild, acute disorders (e.g., the common cold) and of nonlethal chronic conditions (e.g. arthritis), while elderly men are more likely to have incapacitating, fatal conditions such as heart disease. Thus, although women may report more symptoms of illness, very poor health is less common among older women than among older men.

Sex-related differences in health and longevity, which should favor women, nevertheless may often have important consequences that are largely detrimental for the wives in older couples. Indeed, many wives are drawn back to a full-time mother-nurse role when their husbands

experience health problems, thus robbing them of the potential for freedom, individuation and renewed marital satisfaction (Turner, 1982).

Sex-roles and the hypothesis of differential responsiveness of men and women to spousal variables

In order to explain the processes within marriage that promote unequal levels of well-being for men and women, several authors (Barnett & Baruch, 1987; Bernard, 1982; Gove & Tudor, 1973; Methorst, 1984, Turner, 1982)) have proposed that, compared to male roles, the traditional female roles are more demanding and put women at greater risk for psychological distress. The roles of wife and mother, compared to the role of provider, are believed to entail greater emotional reactivity to both positive and negative family events.

Describing the traditional marital roles, Bernard (1972) noted that historically, husbands have enjoyed a superior status to wives who have been socialized to put men's needs before their own. Older women in particular have been reared to view themselves as naturally dependent and to conform to the wishes and needs of their husbands. During their married lives, wives were usually economically dependent on their husbands, performing the low-status work of the housewife and deriving satisfaction almost exclusively from their family life. Thus, by virtue of their family caregiving role, and because they had much to lose if the relationship was threatened, women were very attentive to their husbands' well-being and satisfaction and responded, physically and emotionally, to their needs.

In contrast, older men have been reared to view themselves as the

providers and the decision-makers. In marriage, they received the services of wives willing to devote their lives to taking care of their husbands and children, providing the regularity and the security of well-ordered homes. Secure in their dominant position within the family, husbands felt less compelled to do the accomodating and the adjusting (Bernard, 1982; Turner, 1982). Having a job made it possible for married men to discharge family responsibilities and having a family made work meaningful. Thus, the traditional husband role, which typically combines high control and low demands in terms of social and emotional accomodation within the family, may account for the beneficial effects of marriage on health outcomes for men (Barnett & Baruch, 1987).

An important effect of extreme sex-role specialization, according to Bernard (1975), is that men and women develop different approaches to relationships. At work, to be successful, one usually has to be competitive and aggressive and judge others with some degree of rationality and calculation. Achievement and effectiveness are valued more highly than the quality of relationships. In the home, family members need to be loved and cared for, and treated as ends rather than means. These two styles are mutually exclusive and using them alternatively and judiciously is difficult.

In addition to adult sex-role specialization, early socialization may also promote differences in attitudes and approaches to relationships. Jordan (1984, 1987) has proposed empathy as a psychological construct that is central to the development of relational capacities and sense of self in women. She suggests that women are socialized in childhood to use an empathic/love mode of knowing and

relating which is experienced as a wish to understand and care for the other as subject rather than object. Mutuality and connection in intimate relationships bring pleasure and foster self-esteem as well as a sense of well-being in women. According to Jordan, males in western society are socialized to use an objectifying/power/control mode of knowing and relating. Consequently, for autonomy, domination and satisfaction of individual wants represent conditions of well-being.

In summary, according to the sex-role perspective, it is assumed that women in traditional marriages develop their emotional responsiveness to others to a high degree, particularly with regard to their husbands. However, while this quality may contribute to their self-esteem and happiness, it also makes them vulnerable since this empathic concern for the quality of the marital relationship and for the well-being of their spouse is usually not shared equally by their husbands.

Happiness, sex-roles and responsiveness in older couples.

The recent literature on psychological well-being in later life indicates that most aging couples report very high life satisfaction and marital satisfaction (Belsky, 1990; Gilford, 1984; Connidis, 1989). This is particularly the case among the socioeconomically advantaged and during the early stages of old age. However, SES and chronological age are not the prime determinants of marital satisfaction, nor is retirement status itself. Illness and neuroticism seem to be the important mediating variables (Belsky, 1990; Quinn, 1983), so that when both spouses are in good physical and mental health, they are most likely

to experience global life satisfaction.

As children leave home and husbands (and sometimes wives) retire from work, older couples' life-styles change considerably, but there is evidence that sex differences and sex role stereotypes persist in the marital relation, whether tney are viewed in behavioral terms or in terms of personality traits.

After retirement, men often put more demands on their wives' time and wives usually respond by accomodating their husbands' needs. In a study of 59 recently retired men and their wives, Vinick & Eckerdt (1987) found that an increase, rather than a decrease, in the wife's household tasks was related to more retirement satisfaction for the husband. This was the only change in activities (out of 6 activity areas), that was associated with husbands' retirement satisfaction. For wives, perception of husband's increase in household activities also contributed to their satisfaction, but in addition, wives reported an increase in happiness as a function of increased number of couple activities. Although wives had fewer personal activities than did their husbands, they were willing to exchange personal for joint activities.

Sex differences in conjugal social support have also been reported. A study involving 380 elderly married men and women (Akiyama et al., in press) showed that men tended to engage in supportive exchanges primarily with their wives who, in contrast, relied on children and friends in addition to their spouses. Roughly half of the women did not report receiving confiding and reassurance support from their husbands. Yet husbands were more likely than wives to report that they provided their spouses with instrumental support (e.g., sick care) and affective support

(e.g., confiding, talk when upset). Differences in the perception of conjugal support were greater in the exchange of affective support than instrumental support. Furthermore, a study of age-related changes in conjugal social support in 412 married respondents 50 years and older (Depner & Ingersoll-Dayton, 1985) revealed that sex differences (women perceiving less social support within marriage than do men) remained constant with age, but that overall, as they grew older, adults provided their spouses less support.

Finally, in old age, personality traits continue to conform to sex-role stereotypes, in parallel with the above-mentioned gender differences in behaviors and perceptions. In the Duke Longitudinal Studies (Siegler, 1983), changes in personality were measured, at four points over a period of six years, with a sample of middle-aged and elderly men and women (N = 375). The results showed that personality and sex differences tended to be stable: women were more nurturant, reserved, submissive, naive and relaxed, and men were more outgoing, tough-minded, dominant, shrewed and tense. Only one age effect, which interacted with sex, was noted: over time, women tended to become more guilt-prone and men tended to become more confident.

Thus, among older couples, a life-time of traditional sex roles together with corresponding stable personality characteristics seem to carry over into post-retirement years. The studies cited above, which highlight husbands' reliance on their wives and elderly wives' readiness to accomodate their husbands' needs, lead to the hypothesis, which has not yet been tested, of differential responsiveness to spousal variables, with wives being more responsive than husbands to the psychological and

physical well-being of their spouse.

Empirical data on specific spousal variables as predictors of psychological well-being.

In order to know more precisely which spousal variables affect the psychological well-being of married men and women and to assess the relative importance of such variables for husbands and wives, specific spousal variables must be measured and correlated with measures of psychological well-being. This line of research has only begun to develop in the last decade, and has mostly focused on the physical and mental health status of spouses as predictors of well-being. The degree to which spousal personality dimensions and intellectual abilities are able to predict well-being in married people has received even less attention. Nevertheless, some relevant information has been provided in studies of adult life-span development.

1- Physical illness of spouse. With age, people become more prone to illness and in older married couples, the spouse is typically the primary caregiver. Not surprisingly, most studies have shown that illness of spouse has a detrimental effect on wives' and husbands' psychological well-being.

Atchley & Miller (1983) conducted a longitudinal study in which 208 middle-class couples (mean age of 62) were assessed at three points over a three-year period. They found no evidence that retirement itself affected life satisfaction, self-confidence, activity levels or functional health status. The results showed, however, that spouses' health was very much involved in the life satisfaction of both husbands

and wives. Interestingly, for wives, the relationship between their husband's health and their own life satisfaction was mediated by their husband's morale, such that illness in husbands negatively affected their wives' well-being only to the extent that it affected the husbands' own level of life satisfaction. In contrast, the wives' functional health had a direct effect on the life satisfaction of husbands, which suggests that husbands are more dependent on their wives' health than vice versa.

Krause & Markides (1987) did find direct effects of illness of spouse on the psychological well-being of both husbands and wives, but they also found indirect effects which were restricted to wives. The sample included 148 older married men and women from a random community survey. The authors tested a conceptual model that specified that illness of the spouse promoted psychological disorder (i.e., depression symptoms) by creating or aggravating two forms of role strain: chronic financial and chronic marital strain. The evidence suggested that while illness of spouse was directly related to depressive symtoms for both men and women, the indirect effects of illness via financial and marital strain was experienced only by older women. The model could not identify the mechanisms that link illness of spouse with depressive symptoms in older men.

The effect of husbands' illness on wives' perceptions of the quality of the marriage and in turn, on their psychological well-being had previously been documented in a study by Haftrom & Schram (1984), albeit with couples who were at an earlier stage of the family life cycle. The findings are consistent with the above-mentioned studies and shed more light on the impact of illness in married couples. Three groups of

middle-class couples (mean age of 45, average of 2 children at home) were compared: two experimental groups in which either the husband (N=43) or the wife (N=26) had a chronic illness and a control group in which neither spouse was ill (N=147).

Compared with wives in the control group, wives who suffered from a chronic illness showed no difference in their levels of life satisfaction and marital happiness, despite the fact that they felt less satisfied with their health and with their roles as mothers and wives. In addition, the husbands' time involvement in conjugal interactions did not vary across the two groups. In contrast, when compared to the control group, wives who lived with a chronically ill husband were less satisfied with their marriages and with many aspects of family roles and relationships. They were particularly dissatisfied with their husbands as companions, i.e., with time spent together and with the amount of personal attention received. In this study, the global and marital satisfaction levels of wives were related to the negative changes brought about by their spouses' illness, not to the negative changes brought about by their own health problems. Unfortunately, data on the husbands' levels of satisfaction and perceptions of their marriage were not collected.

Using a somewhat different methodology, Johnson (1985) investigated the quality of 76 late-life marriages in which either the husband or the wife was recuperating from a hospital stay. Based on coder ratings of open-ended interview data rather than self-report measures, the evidence showed no impact of SES, gender of ill spouse or level of disability of spouse, on marital quality. Nonetheless, the qualitative data collected

during interviews indicated that wives as caregivers (N=50) reported more strain than did husbands as caregivers (N=26). The authors did not operationally define the nature of the strain experienced by the wives but they did report that wives as caregivers were more likely to function alone rather than to use formal community supports. Despite the illness of their spouse, the majority of respondents reported high satisfaction and absence of conflict in their marriages. They expressed a proud sense of survivorship and emphasized past and current interdependence.

In short, it appears that the marital dyad is an important source of support in the face of stressful life events such as illness of spouse, but when one partner is ill, the other partner's psychological well-being tends to be negatively affected. For wives, the negative effect seems to be mediated by their husband's morale, by strain on the financial situation of the couple and/or by strain on the marital relation. There is no evidence of similar indirect effects of illness of spouse on husbands' well-being.

2- Mental illness of spouse. Methorst (1984) reviewed the research literature on partners of psychiatric patients. He concluded that in the marital relationship, when one of the partners shows psychiatric symptoms, the chance that the other partner will also show signs of psychopathology is significant, and more so for women.

One possible explanation is that the presence of psychiatric problems in one spouse results in disturbances in the marital relation, which is a particularly important factor for the married woman's well-being. Indeed, Gotlib & Whiffen (1989) have found that the perceptions and behaviors of couples as units are influenced by the presence of

depression or medical disorder in one of the spouses. These authors assessed the marital relationships of 20 depressed psychiatric inpatients, 14 nondepressed medical patients and 18 nondepressed community control subjects and their spouses. Compared to the control group, the couples in both the depressed and the medical groups had more problematic marital interactions and lower marital satisfaction. In the depressed couples in particular, negative affect and negative appraisals of spousal behaviors followed marital interactions. The only consistent gender difference was that female depressed patients had more negative mood than did the male depressed patients following interactions with their spouses. The authors noted that the relatively small number of depressed females (N=7 compared to N=13 for males) may not have provided adequate power to reveal true gender differences.

3- The central role of personality variables. There are no empirical data specific to spousal personality variables as predictors of the psychological well-being of men and women. Yet there is evidence suggesting that such variables constitute key factors in the happiness of married people. On one hand, personality variables are highly correlated with physical and psychological well-being (Costa & McCrae, 1980; Watson & Pennebaker, 1989) and on the other hand, they are strong predictors of marital compatibility (Kelly & Conley, 1987).

The personality dimensions of neuroticism and introversion-extroversion are widely used in research (Watson & Pennebaker, 1989). Neuroticism refers to a broad range of individual differences in the tendency to experience negative, distressing emotions and to possess associated behavioral and cognitive traits. Individuals high in

neuroticism tend to be constantly preoccupied with things that might go wrong, to be anxious, moody and emotionally reactive, and to suffer from chronic fatigue and sleep disturbances. The dimension of introversion-extroversion refers mostly to the social components of personality. At one end of the continuum, very introverted people are shy and cautious, they keep emotions under control, they like a well-ordered, quiet life and they avoid intense stimulation. At the other end of the continuum, more extroverted people are impulsive and are attracted to exciting stimuli; they are easygoing, sociable and optimistic. The two personality traits are considered to be enduring personal characteristics (Costa & McCrae, 1980).

In contrast with stable personality traits, positive and negative affect are concepts used to describe relatively transient mood states. Positive and negative affect states are viewed by some authors as statistically and conceptually independent inasmuch as they have distinctly different correlates (Watson & Pennebaker, 1989). Positive affect is associated with specific events and activities - especially social activities; it reflects one's level of energy, excitement and enthusiasm. Negative affect correlates highly with measures of perceived stress (i.e., major life change, chronic stresses or strains, minor hassles) and it is strongly associated with subjective health complaints. Negative affect subsumes a wide range of aversive mood states such as anger, fearfulness and depression. The independence of positive and negative affect states is still, however, a subject of empirical inquiry. Different correlates are not consistently found for the two affect states in studies of well-being and it has been suggested that these constructs

may represent opposite poles of a single continuum of psychological well-being (Gold, 1988).

Studies that have examined the relations between personality and happiness have found that individuals high in neuroticism are more likely to experience intense states of negative affect while those high in extroversion are more likely to experience high levels of positive affect. Based on these findings, Costa & McCrae (1980) have suggested a model of happiness according to which the positive and negative affect components of well-being, which are largely determined by personality traits, are subjectively balanced by the individual to arrive at a net subjective sense of happiness.

In marital relationships, as in emotional disorders, neuroticism acts to bring about distress or general disturbance. The effect of neuroticism on marital well-being was revealed in a comprehensive analysis of the relation between personality characteristics and marital compatibility (Kelly & Conley, 1987). A cohort of couples born around 1910 were measured at 3 points from their engagements in the 1930's up to 1980. In 1980, the sample included 249 couples, 50 of which were divorced. Out of 17 predictor variables, 3 major aspects of personality accounted for more than half of the predictable variance (25%) in marital compatibility (a composite index of stability and satisfaction): the husband's neuroticism, the wife's neuroticism and the husband's impulse control. Low impulse control on the part of husbands high in neuroticism typically lead to divorce, while low social extroversion lead to stable but unsatisfied marriages. The authors concluded that although neuroticism in husband or wife results in marital disturbance, the

husband's personality characteristics seem to play a greater role in creating and maintaining an unsatisfying marriage or in bringing marriage to an end.

In summary, the existing empirical data suggest that personality characteristics are significant determinants of mood states, level of social adjustment and sense of well-being. Not surprisingly then, in marriage, it appears that each spouse's personality has an impact on the stability and quality of the marital relationship. However, the direct relationship between the personality traits of spouses and their partners' psychological well-being has not been investigated.

4- Responsiveness to spouse's intellectual abilities. Longitudinal studies have indicated that couples become more similar over marriage, and that when changes in intellectual abilities occur over time, the wives' abilities tend to be predicted by those of their husbands.

The Intergenerational Studies investigated the correlates of IQ change between adolescence and middle age (Eichorn, Hunt, & Honzik, 1981). As expected, spouse correlations for IQ and education were moderately high, but considerable differences in IQ were also noted between some participants and their spouses. In the latter situation, the data revealed that living with a spouse whose IQ was markedly different (higher or lower) influenced the study member's IQ change. The effect was not mediated by the spouse's educational level and was particularly true for females.

Consistent findings were reported in a cross-sequential study of 175 married couples (mean age of 42 years) by Gruber-Baldini and Schaie (1986), who investigated changes in couple similarity over a period of 21

years. Measures of cognitive abilities and of three dimensions of personality-flexibility revealed that couple similarity was a function of both initial assortment and convergence of abilities and traits over time. In this sample, spouses did tend to become more similar over marriage. In addition, the results showed that in all significant correlations, it was the husband's performance that predicted that of their wives later on, especially on abilities of Reasoning and of Word Fluency. As with personality variables, there are no data on the relationships between spousal education or intelligence and married people's psychological well-being.

5- Couple similarity and marital satisfaction. The Intergenerational Studies also yielded information on similarity of personality variables and ratings of marital satisfaction within couples (Skolnick, 1981). In a sample of middle-aged persons who had been married for periods ranging from 16 to 27 years, the agreement between spouses on marital satisfaction was low to moderate ($r=.31$). Out of 100 personality variables measured with the Q-Sort method, the 17 items which correlated significantly ($p<.05$) and suggested similarity between spouses were in the categories of cognitive capacity and style, social character, hedonism and coping style. Furthermore, the 20 most similar couples scored higher on marital adjustment than the 20 least similar couples ($p<.001$), thus supporting the hypothesis that personality likeness is associated with greater marital satisfaction.

A concept closely related to spousal similarity, i.e., congruence of perceptions of each other and of the marriage, was also noted as an important factor of marital satisfaction in the longitudinal Berkeley

Older Generation Study (Weishaus & Field, 1988). In a sample of 17 elderly married couples, aged 50 to 69 years, and interviewed at four points between 1928 and 1984, congruent perceptions of each other and of the marriage characterized a stable, positive course of marital satisfaction. However, in all marital categories, the women were reported to be more realistic in evaluating the marriage, while the men tended toward some denial or idealization.

Thus, while it appears that couple similarity promotes marital satisfaction, there is an absence of empirical data on the differential influence of similarity, whether of personality variables or perceptions of the marriage, on individual husbands' and wives' levels of global happiness.

Summary and Hypotheses

In summary, several studies have shown that marriage and marital satisfaction are significant predictors of mental health, with married men generally being in better mental health than married women, and with wives being more affected than husbands by the quality of their marriage. In addition, the evidence shows that except for fatal chronic conditions, the rates of acute and chronic health problems are higher among women than men. Theory and research further suggest that the socialization of men and women, together with traditional sex-roles within marriage, may result in married women being more emotionally responsive than are married men to their partner's well-being and other spousal variables.

Empirical studies have shown that the presence of physical illness or psychiatric disorder in one's spouse is often associated with a

decrease in the marital partner's sense of well-being. Research findings suggest that this negative association is stronger for wives and may be mediated by financial and marital strain as well as by husbands' morale. No investigations were found in the research literature on the relationship between the personality traits of spouses and their partners' well-being, but the existing evidence in this area suggests that neuroticism in particular impacts negatively on the stability and the quality of the marital relation. Although the relationships between education or intelligence in one spouse and the other spouse's psychological well-being have not been investigated, longitudinal studies have found that over time, husbands' intellectual abilities predicted those of their wives. Finally, the research literature suggests that couple similarity promotes marital satisfaction in couples but no data were found on the specific effects of couple similarity on the psychological well-being of husbands compared to that of wives.

In this investigation of the relative impact of spousal variables on the well-being of husbands and wives in long-standing marriages, the following selected variables were measured: education, verbal intelligence, the positive and negative dimensions of psychological well-being, the extroversion and neuroticism dimensions of personality, physical health and marital adjustment. In addition, in order to control reponse bias, two social desirability scales were used, one that measures the need for social approval in general, and another that measures defensiveness in relation to marital functioning in particular. A study conducted by Gove & Geerken (1977) exploring the effects of response bias on self-report measures of mental health found that the effects were

minimal and unsystematic. Nevertheless, age and education were found to be related to response bias, with older respondents tending to have a stronger need for social approval and more highly educated respondents being more likely to have a lower need for approval.

Based on sex-role theory and the empirical research findings mentioned above, two sets of hypotheses were formulated. The first set of hypotheses proposed that the group of husbands would have significantly higher scores than the group of wives on the positive dimension of well-being as well as on the measure of marital satisfaction, and that husbands would have lower scores on the negative dimension of psychological well-being and on the measure of physical health.

The second group of hypotheses deals with the question of differential responsiveness of husbands and wives to spousal variables. First, it was predicted that the husbands' set of variables would account for more of the variance in their wives' global psychological well-being than the wives' set of variables in relation to their husbands' psychological well-being. More specifically, the combination of husbands' physical health, personality characteristics, level of marital adjustment and psychological well-being would constitute a stronger set of predictors of their wives' well-being than would the wives' corresponding variables with regard to their husbands' well-being. Within the set of predictors, the contribution of intelligence and education as predictors of the other spouse's well-being were examined, but previous research did not provide any basis to formulate a hypothesis regarding differences between spouses in their responsiveness to those

variables. Similarly, since there was no empirical basis to predict the importance, relative to each other, of the measured spousal variables as predictors of psychological well-being, this question was examined from an exploratory perspective.

Finally, based on the evidence suggesting that the quality of the marriage is more important for married women than for married men's well-being, the second hypothesis with regard to differential responsiveness was that the positive effects of couple similarity would be more salient for wives than for husbands.

Method

Subjects

The sample in the present study consists of 85 community based older couples in long-standing marriages. The majority of the participants (N = 71) are Canadian World War II army veterans and their wives. The data of 25 of these couples were collected in 1984, as part of the first phase of a major longitudinal investigation of intellectual function in the elderly. The data of the other 46 couples were collected in 1989 and 1990, as part of the latest and ongoing phase of the same research project. In addition, 14 elderly students from Concordia University, together with their spouses, agreed to participate in the present study.

The criteria of selection were the following: (a) French or English speaking residents of the greater Montreal region, (b) fifty years of age or more, (c) living in the community, and (d) married for at least 10 years.

Materials

All forms and questionnaires have French and English versions.

Demographic data. A short interview questionnaire (Appendix A) was used to gather demographic data. It contains 10 items relative to the subjects' occupational, marital, and academic backgrounds.

Marital adjustment. The short-form Marital-Adjustment Test (Locke & Wallace, 1959), (Appendix B), served to assess the current accomodation of husband and wife to each other. This test has 15 items: the first item asks the subject to rate the degree of happiness in his/her marriage on a seven-point scale ranging from "very unhappy" to "perfectly happy"; the next eight items ask the degree of agreement or disagreement with

spouse on various issues, using a six point scale; the last six items are multiple choice questions. The weighted scoring procedure yields a range of possible scores of 2-158 points.

The scale has a high internal reliability coefficient of .90, computed by the split-half technique and corrected by the Spearman-Brown formula. Criterion validity has been established since the scale effectively differentiates between subjects known to be maladjusted in marriage ($\underline{M}$ = 71.70) and subjects, matched for sex and age, known to be exceptionally well-adjusted ($\underline{M}$ = 135.90) in marriage (Locke & Wallace, 1959).

Marital Defensiveness. The Marital Defensiveness Scale (MDS; Jemail & LoPiccolo, 1982), (Appendix C), was used to assess the degree to which respondents are defensive about disclosing the true nature of their marital relationship. The scale contains 20 true and false items and has different versions for males and females. The mean scores are 6.71 and 7.48 for males and females respectively.

The reliability of the male and the female MDS versions has been established at .88 and .90 respectively, using Cronbach's alpha coefficients of internal consistency. The construct validity of the scale was tested by correlating the MDS and the Crowne-Marlow Social Desirability Scale (CM-SDS), a global defensiveness scale. The results yielded correlations of .59 and .66 for the male and female versions respectively. Jemail and LoPiccolo also correlated the MDS and the CM-SDS with the Locke-Wallace Marital-Adjustment Test. They found that the MDS, a content specific scale, was more sensitive than the CM-SDS, a global measure, in tapping defensiveness associated with marital

adjustment. Data also showed that for both sexes, the most defensive subjects, as measured by the MDS, presented themselves as significantly better adjusted in their marital relationship than the least defensive subjects.

Global well-being. The Memorial University of Newfoundland Scale of Happiness (MUNSH; Kozma & Stones, 1983), (Appendix D), measures psychological well-being or happiness. This scale was designed for use with nonclinical samples of older adults. It measures positive and negative aspects of both current mood and general emotional state, with low scores being indicative of depression. The MUNSH has an acceptable internal consistency score ($p > .70$), a good test retest reliability ($r = .70$) and a superior correlation ($r = .86$) with a criterion measure (AVHT, Avowed Happiness Score). The scale contains 24 items and assesses four factors: positive and negative affect, and positive and negative experience. The positive and negative dimensions of well-being have been found to correlate with the extraversion and neuroticism dimensions of personality (Costa & McCrae, 1980; Warr et al., 1983).

Social Desiralility. The Crowne-Marlow (1964) Social Desirability Scale (CM-SDS), (Appendix E), is designed to identify individuals who describe themselves in favorable, socially desirable terms in order to achieve the approval of others. The scale contains 33 items, 18 of which are keyed so that the response most likely to be true is socially undesirable, and 15 are keyed so that the response most likely to be false is socially desirable. One point is scored for each response in the socially desirable direction with scores therefore varying between 0 (no social desirability) to 33 (highest social desirability). The mean

score is 15.1 (SD = 5.6) for males and 16.8 (SD = 5.5) for females, based on a normalization sample of introductory psychology students.

Crowne & Marlow (1973) report an internal consistency coefficient of .88, as well as a test-retest correlation of .88 over a one-month interval. The CM-SDS is primarily a measure of response style, with little content overlap with measures of well-being such as the MUNSH. Whereas the MUNSH is able to differentiate reasonably well between normal and clinical groups, the CM-SDS is unable to do so (Kozma & Stones, 1987).

Personality. The Eysenck Personality Inventory (EPI; Eysenck & Eysenck, 1968), (Appendix F), measures personality in terms of two independent dimensions, i.e., introversion-extraversion and neuroticism-stability. A response distortion (Lie) scale is included to detect attempts to answer questions in a socially desirable manner. The questionnaire consists of 57 items to which the examinee answers "Yes" or "No".

The test-retest reliability coefficients range between .84 and .94, and the validity of the orthogonal, two-dimensional scheme has been empirically demonstrated. The EPI scales are highly correlated with other scales that measure the same dimensions. The EPI is a standardized measure of personality which has been extensively used to assess personality changes with age (Gold et al., 1988).

Verbal Intelligence. The Revised Examination "M" (M-Test) is a measure of intelligence developed for the Canadian Army during World War II. The test consists of eight timed subtests, three of which measure verbal abilities (arithmetic, vocabulary, and verbal analogies). In

order to ensure that individual periods of testing were reasonably short, and because knowledge of vocabulary is generally considered to be the best index of verbal and general intelligence (Sattler, 1988), only the vocabulary subtest (Appendix G) was administered.

The M-Test has good validity and reliability. Wartime studies found validity coefficents of .80 against the American Army Alpha Test and .72 against the British Penrose-Raven Matrices (Blair, personal communication, 1959). Short-term test-retest reliability coefficients established during the war were in the .95 range for the total M test, and a 40-year test-retest reliability coefficient of .78 has recently been established (Schwartzman et al., 1987).

Health. A shortened version of the Seriousness of Illness Rating Scale (Wyler et al., 1971), (Appendix H), was used to assess the subjects' health status. The scale asks the respondents to check off the symptoms and diseases they have experienced in the past two years. Each illness checked is weighed by its seriousness according to test norms, made by health professionals, and the sum of the weighted scores provide a total illness score.

In order to obtain another index of health status, and at the same time, to control for the potential effect of psychotropic drugs on subjects' responses to the measure of psychological well-being, participants were also asked to list the names of the prescribed drugs they were currently taking. These medications were classified into one of the three major classes of psychotropic drugs (i.e., antianxiety, antidepressant, or antipsychotic), into the category of antihypertensive drugs, or into an "any other drug" category (Régie de l'assurance-maladie

du Québec, 1990).

Other materials. Other materials included a Consent Form (Appendix I), and an Acknowledgment of Payment Form (Appendix J), and a stopwatch.

Procedure

With the exception of the 14 senior students and their spouses, the participants completed the above-mentioned measures as part of a larger battery of standardized questionnaires that was administered for the purposes of a major investigation. Using an existing pool of research subjects facilitated the recruitment of participants.

All subjects were first sent a letter informing them of the nature of the research project and were subsequently contacted by phone, asking them if they wished to participate. The letter sent to subjects participating in the larger investigation stated that a large number of factors, including marital adjustment, would be examined, in relation to well-being in old age. The letter to senior students specified that the purpose of the study was to examine factors of marital well-being in older couples.

For the subsample of veterans tested in 1989-90 (N = 46), the data specific to this study were collected in one session, that is, during the first of three sessions of testing. The sample of senior students was also tested in one session. For both of these subsamples, arrangements were taken to test each spouse separately and consecutively, such that wives and husbands did not confer with each other or influence each other's responses. The two spouses were interviewed by the same interviewer and two interviewers, both female, collected the data for this study. The archival veterans' data (N = 25, 1984) were collected in

two sessions, by other examiners, and again, spouses were tested separately.

In all instances, testing took place according to the volunteers' preferences, usually at their homes, less frequently at the university. The interviewer began by reminding the couple of the general purpose and context of the study, assured them of the confidentiality of the information that they were to provide, thanked them for agreeing to participate, and asked them to sign a consent form.

First, the short interview was conducted, with the interviewer writing the subject's answers. Then, the subject was asked to answer the self-report questionnaires and to complete the vocabulary test. When presenting each questionnaire, the interviewer explained the purpose of the questionnaire and the answering procedure. If the subject appeared tired or restless, the interviewer suggested a short break, then resumed testing. The administration of the measures took approximately 45 to 60 minutes for each spouse.

After the testing session was completed, the subjects were thanked, payed $5.00, and asked to sign the Acknowledgement of Payment Form. Finally, the subjects were told that they would receive a summary of the results of the study when completed.

Results

As the group of 25 couples tested in 1984 were not given the Marital Adjustment scale nor the two defensiveness scales, only 60 of the total sample of 85 couples completed all the measures. Consequently, all the multivariate statistical procedures were performed twice, once using the total sample (N = 85) with incomplete data and once using the partial sample (N = 60) with complete data. The preliminary statistical procedures and the statistics describing the characteristics of husbands and wives are reported in full. However, for the benefit of clarity and brevity, and since the full set of predictor variables was more effective than the incomplete one in accounting for variance in the criteria of well-being, the results of the multivariate analyses are reported in full only for the smaller sample (N = 60). The results of the multivariate analyses for the total sample (N = 85) are presented in Appendix K (Tables A to F).

Preliminary statistical procedures

Prior to examining the relationships among the variables of interest, it was necessary to carry out some preliminary statistical procedures and to examine the relationships between the three groups of subjects (group 1, n = 46, 1989-90 veterans; group 2, n = 14, senior university students; group 3, n = 25, 1984 veterans) to determine if they could be combined to form a single larger group.

1) Missing data. Randomly scattered missing data in each group were replaced by the mean value for the corresponding group. This approach to the problem of missing data is recommended by Tabachnick & Fidell (1983)

as an appropriate and conservative procedure for preserving data which would otherwise be deleted in multivariate procedures.

2) Differences between the three groups of subjects. Two sets of two multivariate analyses of variance (SPSSX MANOVA) were performed to see if there were statistically significant differences between the variables of the three groups of husbands and between those of the three groups of wives.

The results showed few differences between groups of husbands. The presence of a small multivariate difference was found when the three groups were compared on 9 variables (F (9,82) = 1.66, p <. 05) but no significant differences were found when groups with complete data, 1 and 2, were compared on all 12 variables (F (12,58) = 1.78, p = .08). It may be that the latter analysis did not have enough power to detect small differences between groups, due to a smaller sample size. Table 1 shows the means and standard deviations of all variables for each of the three groups of husbands, as well as the results of the univariate analyses of variance. These results showed that among husbands, the group of senior students (group 2) had more years of formal education than the other two groups, and that they had higher scores on vocabulary, reported fewer illnesses and had lower scores on the social desirability measure than did the 1989-90 group of veterans (group 1).

More differences seemed to exist between groups of wives than between groups of husbands. The analyses revealed a multivariate difference between the combinations of the 9 variables measured in the 3 groups (F (9,82) = 2.33, p <.003) as well as between the combinations of 12 variables of groups 1 and 2 (F (12,58) = 2.74, p <.007). As can be

Table 1

Univariate Analyses of Variance for Mean Differences Between the Three Groups of Husbands

Variable		Group			F	
		1 (n=46)	2 (n=14)	3 (n=25)	2,82 df	1,58 df
Education	M	9.74	14.21	11.16	5.78**	14.48***
	SD	3.95	3.5.	5.33		
Vocabulary	M	22.80	25.43	21.72	2.48	4.30*
	SD	4.16	4.09	6.66		
Illness	M	2149.59	1162.79	2159.64	1.10	3.89*
	SD	1723.11	1436.79	1766.74		
Extro-version	M	11.04	9.79	12.20	2.35	1.31
	SD	2.74	5.66	2.81		
Neuroticism	M	8.28	7.07	8.48	.34	.59
	SD	5.61	3.17	6.01		
Positive Affect	M	3.67	3.64	3.24	.83	.01
	SD	1.35	1.34	1.51		
Positive Experience	M	5.93	6.57	5.24	3.75*	2.47
	SD	1.47	.65	1.85		
Negative Affect	M	.46	.29	.56	.37	.39
	SD	.96	.61	1.08		
Negative Experience	M	1.06	.50	1.20	1.08	2.06
	SD	1.39	.85	1.85		
Marital Adjustment	M	115.06	123.36			1.49
	SD	23.56	17.11			
Marital Defensiveness	M	11.91	10.86			.46
	SD	5.24	4.54			
Social Desirability	M	20.04	15.14			8.16**
	SD	6.18	2.96			

MANOVA: $F(9,82) = 1.66$, $p < .05$
MANOVA: $F(12,58) = 1.78$, $p < .08$
*** $p < .001$**, $p < .01$, * $p < .05$

seen in Table 2, the wives of senior students differed from the other two groups in that they had more years of education and higher scores on the vocabulary test, as well as lower scores on neuroticism, extroversion, negative affect and negative experience. Furthermore the spouses of senior students had higher scores on the marital adjustment scale and lower scores on the social desirability measure.

It must be noted that the unequal and small sample sizes, together with the relatively large number of variables, limited the power and the accuracy of the analyses. Tests of homogeneity of generalized variance revealed that this assumption was indeed violated in all four MANOVAS. However, Hakstian et al. (1979) have found in Monte Carlo studies that, given a "positive" condition, e.g., $\underline{n}$ 1 > $\underline{n}$ 2 and S1 (determinant) > S2, the Hotelling's two-sample T test is conservative and robust with regard to violations of assumptions. Fortunately, this was the case for the two aforementioned MANOVAS comparing groups 1 and 2, so that the results for those analyses can be considered valid.

Finally, in order to test for mean differences across groups on the demographic variables of socioeconomic status, number of years married and husbands' and wives' age, four additional univariate analyses of variance were performed. The results (see Table 3) indicated no differences for the first two variables and significant differences in age, with the subjects from the 1984 veterans sample being approximately three and a half years younger than the other two groups.

In summary, these results showed that compared to the veterans, the senior students were favored in terms of education, health and psychological well-being, and had lower scores on social desirability. These differences were more salient between groups of wives than between

Table 2

Univariate Analyses of Variance for Mean Differences Between the Three Groups of Wives

Variable		Group			F	
		1 (n=46)	2 (n=14)	3 (n=25)	2,82 df	1,58 df
Education	M	9.52	14.07	10.32	8.59***	16.74***
	SD	3.32	3.67	4.05		
Vocabulary	M	20.52	26.29	18.92	7.17***	10.39**
	SD	5.69	5.21	6.78		
Illness	M	1807.65	844.71	2032.44	2.54	4.46*
	SD	1647.36	538.44	1963.61		
Extro-version	M	10.43	9.43	12.16	3.08*	.70
	SD	4.11	3.43	2.37		
Neuroticism	M	11.76	7.71	10.88	3.35*	5.84*
	SD	5.40	4.53	4.89		
Positive Affect	M	3.46	3.36	3.20	.25	.12
	SD	1.42	1.15	1.66		
Positive Experience	M	5.98	6.29	3.80	.64	.44
	SD	1.20	1.20	1.47		
Negative Affect	M	1.24	.36	.84	3.10*	6.67**
	SD	1.27	.50	1.34		
Negative Experience	M	1.48	.50	.76	3.43*	3.63
	SD	1.71	.85	1.16		
Marital Adjustment	M	103.74	122.50			5.04*
	SD	29.76	12.47			
Marital Defensiveness	M	12.20	11.43			.12
	SD	4.77	4.13			
Social Desirability	M	20.28	14.00			11.01**
	SD	6.13	5.63			

MANOVA: $F(9,82) = 2.33$, $p < .003$
MANOVA: $F(12,58) = 2.74$, $p < .007$
*** $p < .001$, ** $p < .01$, * $p < .05$

Table 3

Univariate Analyses of Variance for Mean Differences of Demographic Variables (N = 85)

Variable		Group			F
		1 (n = 46)	2 (n= 14)	3 (n = 25)	
Blishen	M	48.40	57.15	50.66	2.14
	SD	13.60	11.21	15.53	
Years married	M	39.20	38.93	37.24	.45
	SD	8.05	8.65	8.97	
Husbands' age	M	68.61	67.50	64.36	6.39 *
	SD	4.32	3.86	5.96	
Wives' age	M	65.87	66.00	61.48	5.67 *
	SD	5.33	4.35	6.36	

* p < .01

groups of husbands. Furthermore, the 1984 veterans were slightly younger than the other participants.

3) Patterns of intercorrelations across groups. The matrices of the intercorrelated variables within each group were then inspected in order to establish whether the significant intercorrelations were similar to each other across groups. In view of the large number of variables involved, the Bonferroni multistage procedure (Larzelere & Mulaik, 1977) was used to identify the correlations significant at the .05 level. This procedure reduces the risk of committing Type 1 errors by using an experimentwise alpha level which in this case was .0006 in matrices of 12 variables and .001 in matrices of 9 variables.

For the husbands, 5, 0 and 3 significant correlations were found in groups 1, 2 and 3 respectively. For the wives, 4, 0 and 5 significant correlations were found in groups 1, 2 and 3. The small number of subjects (n = 14) no doubt accounts for the absence of statistically significant correlations in group 2.

Examination of the patterns of the significant correlations across the three groups of husbands (Table 4) and across the three groups of wives (Table 5) revealed overall consistency, such that when two variables in one group correlated significantly, the correlation coefficients for the same two variables in the other two groups either also reached significance or at least were of the same sign, i.e., positive or negative, as those of the significant correlation(s). Two correlations, however, were not consistent across groups of husbands: negative experience with positive experience (-.59, .42 and -.51) and marital defensiveness with social desirability (.62 and -.34), with the

Table 4

Significant Correlations Between Variables Within the Three Groups of Husbands

Correlations	Groups		
	1 (n=46)	2 (n=14)	3 (n=25)
Education and Vocabulary	.51	.51	.71 ***
Positive Experience and Positive Affect	.70 ***	.25	.44 *
Positive Experience and Negative Affect	-.55 ***	-.06	-.40 *
Positive Experience and Negative Experience	-.59 ***	.42	-.51 **
Negative Experience and Negative Affect	.48 ***	.59 *	.84 ***
Negative Experience and Illness	.51 ***	.30	.65 ***
Marital Adjustment and Marital Defensiveness	.66 ***	.64 **	
Marital Defensiveness and Social Desirability	.62 ***	-.34	

Note: Coefficients with *** indicate significance at .05 level according to Bonferroni's Multistage criteria.

*** p <.001, ** p <.01, * p <.05

Table 5

Significant Correlations Between Variables Within the Three Groups of Wives

Correlations	Groups		
	1 (n=46)	2 (n=14)	3 (n=25)
Education and Vocabulary	.49 ***	.22	.79 ***
Positive Experience and Negative Experience	-.49 ***	-.67 **	-.66 ***
Negative Experience and Negative Affect	.66 ***	.45	.64 ***
Negative Affect and Illness	.20	.54 *	.71 ***
Negative Affect and Neuroticism	.53 ***	.32	.62 ***
Marital Adjustment and Marital Defensiveness	.63 ***	.77 ***	

Note: Coefficients with *** indicate significance at .05 level according to Bonferroni's Multistage criteria.

*** p <.001, ** p <.01, * p <.05

coefficients in group 2 (senior students) being in the unexpected directions. This may have been a chance result due to the relatively limited variability in the scores of the subjects in group 2.

Since the majority of the significant correlations (14 out of 16 correlations) were similar across the three groups, it appeared that despite the differences between groups, the latter showed the same pattern of relations across variables. In this study, which essentially looked at correlates of well-being, subgroup differences were informative for descriptive purposes but the most relevant factor in deciding to combine the three samples into a single group was the consistency of relations between variables. Regression effects, not difference effects, were central to the purpose of the study. Once the presence of consistency was established, the differences between subgroups, by increasing the variability within the sample (in education, for example), served to ensure a better representation of the population and to allow more generalizability of the results. Consequently, the remaining preliminary procedures as well as the descriptive and inferential statistical analyses were applied to a single sample which combined either three groups (N = 85 couples, with incomplete data) or two groups (N = 60 couples, with complete data), as mentioned above.

4) Univariate and multivariate outliers. Univariate outlier analyses were performed on all the variables, which led to the identification of 3 outliers in the husbands' data and 5 outliers in the wives' data. Both univariate and multivariate outliers can unduly affect the size of correlations and the many multivariate procedures involving correlations. In order to reduce the impact of the 8 outliers (located

in 5 different variables) Z transformations were performed, with all standardized scores larger than 3.00 being recoded as 3.00. This option preserves the deviancy of a case without allowing it to be so deviant that it distorts correlation (Tabachnick & Fidell, 1983). No multivariate outliers were found, all cases being within Mahalanobis distance.

Characteristics of husbands and wives

Prior to testing the hypotheses of this study, several analyses were performed, with the dual purpose of fully understanding the characteristics of the participants and selecting a reduced number of variables for the multiple regression analyses. First, simple descriptive statistics are presented, followed by matrices of the intercorrelations between variables within groups of husbands and wives. Finally the results of analysis of the specific relationship between global well-being and the other variables are presented for husbands and wives separately.

1) Descriptive statistics. The 85 couples who participated in this study had been married for a mean period of 38.19 years (with a range of 10 to 56 years). Eighty-one percent of the men were retired and 89% of the women were retired or unemployed. Although 83% of the wives reported having worked outside their homes at some point in their lives, only 20% of the 60 women (n = 10) from whom this data was collected had worked full time for at least 20 years. The majority of the wives had mainly been homemakers during their lives. With a mean Blishen rating of M = 50.50 (SD = 14.05), this sample was of middle and working class

background according to the Blishen scale (Blishen & McRoberts, 1976). The ratings of socio-economic status and the number of years of education were highly correlated (r = .71 for men and .56 for women) and therefore Blishen ratings were not entered in the remaining statistical analyses.

The descriptive statistics for all the other variables are detailed for husbands and wives in Table 6. The age range for the combined groups covers 32 years but the majority of subjects, i.e, 79% of the wives and 89% of the husbands were between 60 and 75 years of age. Similarly, this sample shows a wide range in years of education (2-22 years), but the normal distribution of scores indicate that most of the participants had at least part of a high school education. The sample seems to be equally priviledged with regard to their physical health, as the majority of the subjects reported few serious symptoms or illnesses. Forty-one percent of the men and 70% of the women used prescribed medication, mostly for problems related to hypertension and other physical ailments rather than for psychiatric or psychological disorders (see Table 7).

With regard to psychological well-being, most husbands and wives tended to report high levels of positive affect and experience (negatively skewed distributions of scores) and low levels of negative affect and experience (positively skewed distributions of scores). Husbands and wives appeared to experience average degrees of marital adjustment: their mean scores (117 and 108 respectively) fall between the mean scores reported by Locke & Wallace (1959), i.e., 135.90 for exceptionally well-adjusted subjects and 71.70 for maladjusted subjects. The mean scores on marital defensiveness and social desirability reveal that both husbands and wives displayed high defensiveness relative to the standardized means reported

Table 6

Descriptive Statistics for all Variables for Husbands and Wives

Variable	Spouses	Mean	Standard Deviation	Range
Age	Husbands	67.18	5.09	52 - 82
	Wives	64.60	5.81	50 - 80
Education	Husbands	10.89	4.58	3 - 22
	Wives	10.51	3.92	2 - 22
Vocabulary	Husbands	22.92	5.10	7 - 30
	Wives	21.00	6.38	6 - 30
Illness #	Husbands	1966.93	1635.43	.00 - 7132.61
	Wives	1679.72	1530.89	.00 - 6700.27
Extroversion	Husbands	11.18	3.45	1 - 19
	Wives	10.78	3.66	2 - 20
Neuroticism	Husbands	8.14	5.39	1 - 23
	Wives	10.83	5.26	1 - 22
Positive Affect	Husbands	3.54	1.39	.00 - 5
	Wives	3.36	1.45	.00 - 5
Positive Experience	Husbands	5.83	1.55	1 - 7
	Wives	5.98	1.28	2 - 7
Negative Affect	Husbands	.46	.95	.00 - 5
	Wives	.98	1.23	.00 - 5
Negative Experience	Husbands	1.01	1.48	.00 - 5
	Wives	1.11	1.50	.00 - 5
Marital Adjustment	Husbands	117.00	22.37	66 - 158
	Wives	108.12	27.82	30 - 158
Marital Defensiveness	Husbands	11.67	5.06	1 - 20
	Wives	12.02	4.61	1 - 20
Social Desirability	Husbands	18.90	5.95	10 - 33
	Wives	18.24	6.53	9 - 32

Note: N = 85 for the groups of husbands and wives for all variables except the last three variables, in which case N = 60.
Weighted scores are computed for this variable; higher scores indicate more serious illnesses.

Table 7

Frequencies and Percentages for Prescribed Medication Used by Husbands and Wives (N = 60)

	Frequency		Percentage	
	Husbands	Wives	Husbands	Wives
Subjects using one or more psychotropic drug	9	10	10.60	16.70
Antianxiety	5	9	8.30	15.00
Antidepressant	4	4	6.70	6.70
Antipsychotic	0	0	0.00	0.00
Subjects using one or more non-psychotropic drug	34	37	40.00	61.70
Antihypertensive	29	30	48.30	50.00
Any other drug	18	18	30.00	30.00
Subjects using any type of drug	35	42	41.20	70.00

by Jemail & LoPiccolo (1982) and by Crowne & Marlow (1959).

The data on the use of psychotropic medication were analyzed to determine whether the use of such drugs affected the scores on the psychological well-being measure (MUNSH). The results of multivariate analyses of variance (SPSSX MANOVA) showed that the scores on the positive and negative dimensions of well-being were not significantly different for the men who used psychotropic drugs and those who did not ($F(2,58) = 1.75$, $p = .18$). Similarly, no significant effect of drugs on well-being were found for the women ($F(2,58) = 2.56$, $p = .09$).

2) Intercorrelations among variables for groups of husbands and wives separately. The inter-relationships between the variables were next analyzed to further understand the characteristics of the married men and women in this study. A second purpose was to select the most appropriate variables for inclusion in the subsequent multivariate statistical analyses. Examination of the correlation matrices (see Tables 8 and 9) revealed 15 statistically significant correlations between variables for husbands and 14 significant correlations for wives, based on the Bonferroni multistage procedure.

Considering the variables in both matrices, it appeared that age was not associated with any of the other variables for husbands or for wives. For both groups, vocabulary had a positive correlation with education, as expected. Education was negatively correlated with social desirability, but only for husbands, so that the more educated husbands were, the lower was their need for social approval.

Illness was positively associated with neuroticism for both husbands and wives, with subjects scoring more highly on neuroticism reporting

Table 8

Zero-order Correlations Among Variables for Husbands

Variables	Age	Education	Vocabulary	Illness	Extroversion	Neuroticism
Age		-.01	.15	.02	-.09	-.03
Education			.59***	-.31**	-.12	-.22*
Vocabulary				-.18	.05	-.14
Illness					-.00	.43***
Extroversion						.06
Neuroticism						
Positive Affect						
Positive Experience						
Negative Affect						
Negative Experience						
Marital Adjustment						
Marital Defensiveness						
Social Desirability						

Notes:
N = 60 for Marital adjustment, Marital defensivenes and Social desirability; N = 85 for all other variables.

Coefficients with *** indicate significance at .05 level according to Bonferroni's Multistage criteria.

*** $p < .001$, ** $p < .01$, * $p < .05$

Table 8 (continued)

Zero-order Correlations Among Variables for Husbands

Variables	Pos. Affect	Pos. Exper.	Neg. Affect	Neg. Exper.	Mar. Adjust.	Mar. Def.	Social Des.
Age	-.03	-.04	-.09	-.02	.01	.11	.02
Education	.12	.21	-.13	-.25*	.04	-.29*	.48***
Vocabulary	.15	.21*	-.05	-.18	-.00	-.29*	-.37**
Illness	-.43***	-.42***	.32**	.55***	-.33**	-.09	.26*
Extro-version	.03	.01	.05	.05	.07	.11	.04
Neuro-ticism	-.27**	-.27**	.50***	.44***	-.40***	-.38**	-.10
Positive Affect		.55***	-.47***	-.47***	.14	.11	.19
Positive Experience			-.47***	-.52***	.29*	.19	.11
Negative Affect				.64***	-.40***	-.22	-.18
Negative Experience					-.42***	-.15	-.10
Marital Adjustment						.63***	.17
Marital Defensiveness							-.50***
Social Desirability							

Notes:
N = 60 for Marital adjustment, Marital defensivenes and Social desirability; N = 85 for all other variables.

Coefficients with *** indicate significance at .05 level according to Bonferroni's Multistage criteria.

*** $p < .001$, ** $p < .01$, * $p < .05$

Table 9

Zero-order Correlations Among Variables for Wives

Variables	Age	Education	Vocabulary	Illness	Extroversion	Neuroticism
Age		.00	.12	.11	-.06	.14
Education			.61***	-.14	-.00	-.20
Vocabulary				-.09	-.04	-.10
Illness					.21	.40***
Extroversion						.17
Neuroticism						
Positive Affect						
Positive Experience						
Negative Affect						
Negative Experience						
Marital Adjustment						
Marital Defensiveness						
Social Desirability						

Notes:
N = 60 for Marital adjustment, Marital defensiveness and Social desirability; N = 85 for all other variables.

Coefficients with *** indicate significance at .05 level according to Bonferroni's Multistage criteria.

*** $p < .001$, ** $p < .01$, * $p < .05$

Table 9 (continued)

Zero-order Correlations Among Variables for Wives

Variables	Pos. Affect	Pos. Exper.	Neg. Affect	Neg. Exper.	Mar. Adjust.	Mar. Def.	Social Des.
Age	.02	.00	-.05	-.03	.12	.16	-.13
Education	-.10	.13	-.17	-.20	.28*	-.04	-.33**
Vocabulary	-.07	.04	-.12	-.12	.05	-.05	-.14
Illness	-.18	-.32**	.43***	.19	-.20	.17	-.17
Extro-version	.15	-.16	.07	-.08	.01	.09	.32
Neuro-ticism	-.23*	-.41***	.56***	.50***	-.39**	-.14	.00
Positive Affect		.36***	-.37***	-.35***	.45***	.33**	.10
Positive Experience			-.41***	-.51***	.33**	.18	-.09
Negative Affect				.66***	-.51***	-.34**	-.03
Negative Experience					-.47***	-.33**	.01
Marital Adjustment						.58***	-.07
Marital Defensiveness							.35**
Social Desirability							

Notes:
N = 60 for Marital adjustment, Marital defensiveness and Social desirability; N = 85 for all other variables.

Coefficients with *** indicate significance at .05 level according to Bonferroni's Multistage criteria.

*** p < .001, ** p < .01, * p < .05

more serious illnesses. Interestingly, illness related differently to the four factors of psychological well-being in the two groups. For husbands, the more serious their illnesses, the lower their positive affect and experience and the greater their negative experience. In contrast, for wives, poorer health was only associated with more negative affect; it did not seem to impact on the positive dimension of well-being.

In terms of personality dimension, the matrices indicated that extroversion was not correlated with any other variable for either group of subjects. Neuroticism was associated with the negative dimension of well-being for husbands and for wives, so that those who scored higher on neuroticism also reported more negative affect and experience. In addition, the wives whose neuroticism scores were high tended to report fewer positive experiences.

For both groups, the four factors of the psychological well-being measure (MUNSH) were, as expected, significantly intercorrelated, with positive affect and experience, and negative affect and experience scores correlating positively, and the positive and negative factors correlating negatively. Furthermore, the matrices indicated that for wives, the higher their marital adjustment, the higher was their positive affect and the lower their negative affect and experience. In contrast, for husbands, marital adjustment was not related to positive affect or experience and was only marginally significantly related to negative affect and experience.

Finally, with regards to the two defensiveness variables, the correlation coefficients showed a significant positive correlation

between social desirability and marital adjustment, such that the greater their need for social approval, the better the adjustment husbands and wives reported in their marriages. The social desirability and the marital defensiveness scores were positively correlated, but only for the husbands.

Based on the results of the correlation matrices, the number of variables to be used in subsequent multivariate analyses was reduced, thus obtaining more acceptable subject/variable ratios for the multivariate analyses. In view of the positive correlations between the affect and experience factors in both dimensions of well-being, the four separate factors of the MUNSH were combined to form three variables: the positive and the negative dimensions of well-being and the global index of well-being. Age, vocabulary and social desirability were omitted, in view of the few significant relationships existing between them and the other variables. Consequently, the variables retained for the multivariate analyses included education, illness, extroversion, neuroticism, the positive and negative dimensions of well-being, marital adjustment and marital defensiveness.

3) Predicting psychological well-being from one's own variables. The relations between husbands' and wives' global psychological well-being and other variables could not be clearly established using simple correlational analyses because simple correlations are confounded by the variance commonly shared by the different variables. The data were therefore further analyzed by means of multiple regression. This procedure tests the additive effects of independent variables on a criterion variable to determine the size of the overall relationship.

Each variable is also evaluated in terms of its unique contribution to the prediction of the criterion (Tabachnick & Fidell, 1983).

The results of the analyses (SPSSX REGRESSION) used to predict husbands' and wives' global well-being (total MUNSH scores) are shown in Table 10. The set of predictors accounted for 35% of the variance (F = 4.77, p <.001) in husbands' well-being scores but only illness emerged as a significant predictor of well-being. The regression analyses for wives showed that 49% of the variance in well-being scores was accounted for (F = 8.35, p < ,000), with neuroticism as well as marital adjustment emerging as significant predictors.

First set of Hypotheses: Differences between husbands and wives

It was predicted that compared to wives, husbands would have higher levels of psychological well-being and marital adjustment and would report fewer illnesses. In order to test this first set of hypotheses and to identify other possible differences between husbands and wives, a multivariate analysis of covariance (MANCOVA) was performed for 9 variables, adjusted for the covariate marital defensiveness, with N = 60 couples. The MANCOVA indicated the presence of a significant multivariate difference between husbands and wives (F(9,109) = 3.86, p = .000). In addition, it showed that the covariate had strong significant effects on the combination of dependent variables (F(9,116) = 7.39, p = .000). The results of the evaluation of the assumptions of normality, linearity and homogeneity of generalized variance were satisfactory.

As can be seen in Table 11, within the MANCOVA, the scores of all

Table 10

Multiple Regression Coefficients for Husbands' and Wives' Global Well-being, with Their Own Variables as Predictors (N = 60)

Variables	Beta #	r	sr_i
	Husbands' Well-being		
Education	-.03	.09	-.02
Illness	-.30	-.48	-.24 *
Extroversion	.21	.20	.21
Neuroticism	-.22	-.39	-.17
Marital Adjustment	.24	.38	.17
Marital Defensiveness	-.09	.21	-.06
Note: R = .59, R2 = .35, F(6,53) = 4.77. p <.001			
	Wives' Well-being		
Education	.13	.28	.12
Illness	.01	-.16	.02
Extroversion	.13	.11	.13
Neuroticism	-.36	-.51	-.32 **
Marital Adjustment	.33	.59	.23 *
Marital Defensiveness	.15	.40	.11
Note: R = .70, R2 = .49, F(6,51) = 8.36, p <.000			

Standardized regression coefficients

*** p <.001, ** p <.01, * p <.05

Table 11

Univariate Analyses of Variance for Mean Differences Between Husbands and Wives, Adjusting for Marital Defensiveness (N = 60)

Effect	Dependent Variable	F (1,117 df)
Covariate	Age	2.20
	Education	3.76*
	Vocabulary	5.31*
	Illness	.08
	Extroversion	1.25
	Neuroticism	8.74**
	Positive Dimension	7.07**
	Negative Dimension	10.62**
	Marital Adjustment	64.55***
Gender	Age	8.66**
	Education	.04
	Vocabulary	2.45
	Illness	1.62
	Extroversion	.70
	Neuroticism	9.67**
	Positive Dimension	.59
	Negative Dimension	6.11**
	Marital Adjustment	7.19**

MANCOVA: Effect of covariate: $F = 11.32$, $p = .000$
Effect of gender: $F = 3.86$, $p = .000$
*** $p < .001$, ** $p < .01$, * $p < .05$

the dependent variables except age, illness and extroversion varied significantly as a function of the covariate (marital defensiveness). The associated univariate analyses of variance, in which all subjects were treated as if they had equal scores on marital defensiveness, revealed that husbands and wives differed on four variables: age, neuroticism, the negative dimension of well-being and marital adjustment. The husbands in this study were older than the wives, but more importantly in relation to the first set of hypotheses, they reported better marital adjustment and less negative affect and experience than did the wives, as predicted. Husbands and wives did not differ on the measure of extroversion but husbands had lower scores on neuroticism. Contrary to prediction, no differences were found between the scores of the two groups on measures of positive dimension of well-being and physical health.

Second set of hypotheses: Differential responsiveness to spousal variables

In the second group of hypotheses, it was first predicted that the husbands' set of variables would account for more of the variance in their wives' global well-being than the wives' set of variables in relation to their husbands' well-being. To test this hypothesis, a series of 6 multiple regression analyses was performed on husbands' and wives' data within couples. The results supported the main hypothesis inasmuch as they revealed that spousal variables significantly predicted wives' well-being but had no significant relationships with husbands' well-being.

1) Spousal variables as predictors of wives' global well-being. The regression of the husbands' variables on their wives' global well-being was statistically significant and accounted for 29% of the variance in the criterion scores (F = 2.60, p = .02). As can be seen in Table 12, husbands' marital adjustment, closely followed by the positive dimension of their well-being, emerged as significant predictors. Husbands' illness also contributed significantly to the prediction but appeared to function as a suppressor variable: while it had no direct relationship with wives' well-being, it did share variance with the significant predictor variables, as was shown in the correlation matrix of husbands' variables (see Table 8). The presence of a suppressor variable increases the power of the analysis by "suppressing" or partialling out irrelevant variance (Tabachnick & Fidell, 1983).

In order to determine if the spousal variables which predicted wives' global well-being were differentially related to its separate positive and negative dimensions, two sets of standard multiple regressions were performed, regressing the combination of independent variables on the positive and the negative dimensions of well-being.

2) Spousal variables as predictors of the positive and negative dimensions of wives' well-being. As can be seen in Table 13, the analysis of regression of husbands' variables in relation to the positive dimension of their wives' well-being was statistically significant, accounting for 28% of the variance (F = 2.44, p = .03) in the criterion scores. Most of this variance was associated with the husbands' marital adjustment, the only predictor variable to reach statistical significance in this analysis.

Table 12

Multiple Regression Coefficients for Wives' Global Well-being, with their Husbands' Variables as Predictors (N = 60)

Predictor Variables	Beta #	r	sr_i
Education	.10	.13	.08
Illness	.32	.03	.25 *
Extroversion	-.14	-.13	-.13
Neuroticism	-.18	-.20	-.14
Positive Dimension	.40	.22	.29 **
Negative Dimension	.28	-.10	.18
Marital Adjustment	.50	.35	.30 **
Marital Defensiveness	-.12	.20	-.08

R = .54, $R2$ = .29, $F(8,51)$ = 2.60, p <.02

Standardized regression coefficients

** p <.01. * p <.05

Table 13

Multiple Regression Coefficients for the Two Dimensions of Wives' Well-being, with their Husbands' Variables as Predictors (N = 60)

Predictor Variables	Beta #	r	sr_i
	Positive Dimension		
Education	-.07	-.07	-.06
Illness	.25	.04	.20
Extroversion	-.22	-.17	-.20
Neuroticsm	-.13	-.10	-.23
Positive Dimension	.29	.19	.22
Negative Dimension	.12	-.17	.08
Marital Adjustment	.39	.38	.25 *
Marital Defensiveness	.03	.33	.02
$R = .53$, $R2 = .28$, $F(8.51) = 2.44$, $p < .03$			
	Negative Dimension		
Education	-.21	-.26	-.18
Illness	-.30	-.02	-.23
Extroversion	.05	.07	.05
Neuroticism	.18	.13	.14
Positive Dimension	-.39	-.20	-.29 *
Negative Dimension	-.35	.02	-.23
Marital Adjustment	-.48	-.25	-.31 **
Marital Defensiveness	.22	-.06	.14
$R = .51$, $R2 = .27$, $F(8,51) = 2.31$, $p < .03$			

Standardized regression coefficients
** $p < .01$. * $p < .05$

In the analysis regressing husbands' variables on the negative dimension of their wives' well-being, 27% of the variance in criterion scores was accounted for (F = 2.31, p = .03) and husbands' marital adjustment again emerged as the strongest predictor, followed by husbands' positive dimension of well-being.

3) Spousal variables as predictors of husbands' well-being. In the series of regression analyses used to examine the relationships between the set of wives' variables and their husbands' well-being, the results (see Table 14) showed that the predictor variables did not account for statistically significant amounts of variance in the criterion scores, whether the criterion be global well-being, or the separate positive and negative dimensions of well-being.

In summary, the series of standard regression analyses revealed that spousal variables were significantly associated with wives' well-being, whether the wives' scores on global well-being or on the separate positive and negative dimensions of well-being were used as criterion. Spousal variables were not, however, associated with husbands' well-being. The most important predictor of wives' well-being was their husbands' evaluation of marital adjustment, closely followed in importance by the level of positive dimension of their husbands' well-being. Husbands' illness had an indirect but significant relationship with wives' well-being.

4) Couple similarity as a predictor of psychological well-being. The second hypothesis with regard to differential responsiveness to spousal variables was that the positive effects of similarity would be more salient for wives than for husbands. Although simple correlations do

Table 14

Summary of Results of Multiple Regression Analyses for Husbands' Well-being, with their Wives' Variables as Predictors (N = 60)

Criterion	R	R2	df	F	p
Global Well-being	.29	.08	6,78	1.18	.32
Positive Dimension	.32	.10	"	1.58	.16
Negative Dimension	.26	.07	"	.97	.45

not constitute precise indices of similarity, they do provide complementary information to more accurate measures of similarity. Consequently, as a preamble to the analysis of the relationships between similarity and well-being, the simple correlations between husbands' and wives' variables within couples were examined.

Table 15 shows that health, personality characteristics, psychological well-being and level of marital adjustment were not significantly correlated between spouses. The only variables that were correlated were age, education, vocabulary and social defensiveness, the first two of which can be classified as sociodemographic variables. Interestingly, the correlation coefficient for marital adjustment was only marginally significant according to the Bonferroni Multistage criteria.

The concept of similarity was defined in this study as the difference scores between husbands and wives within couples, computed, irrespective of direction, for the following five variables: age, education, vocabulary, extroversion and marital adjustment. Neuroticism and illness were excluded because similarity on high levels of these variables logically should not lead to happiness and the two components of well-being were excluded because they served as criterion variables. The resulting five difference score variables were entered into a series of multiple regression analyses that evaluated their ability to predict, in turn, global well-being and the positive and negative dimensions of well-being, for husbands and wives.

The results revealed that the combination of variables did not predict husbands' well-being; however, the negative dimension of wives'

Table 15

Zero-order Correlations Among Husbands' and Wives' Variables Within Couples

Husbands	Wives					
Variables	Age	Education	Vocabulary	Illness	Extroversion	Neuroticism
Age	.73***	-.14	.05	.06	-.09	.14
Education	-.04	.63***	.48***	-.01	-.03	-.19
Vocabulary	.09	.40***	.45***	.06	-.03	.03
Illness	-.08	-.32**	-.26**	.06	.16	.12
Extroversion	-.12	-.06	-.00	.10	-.00	.13
Neuroticism	-.09	-.26*	-.23*	-.10	.00	.15
Positive Dimension	.08	.17	.22*	-.05	.01	-.05
Negative Dimension	-.02	-.09	-.13	-.12	-.06	.07
Marital Adjustment	.04	.03	.11	-.05	-.14	-.26*
Marital Defensiveness	.10	-.22	-.13	.15	.11	-.16
Social Desirability	.07	-.35**	-.27*	.13	.38**	.12

Note 1: Coefficients with *** indicate significance at .05 level according to Bonferroni's Multistage criteria.

Note 2: N = 60 couples for the last three variables, N = 85 for all other variables.

*** $p < .001$, ** $p < .01$, * $p < .05$

Table 15 (continued)

Zero-order Correlations Among Husbands' and Wives' Variables Within Couples

Husbands	Wives				
Variables	Positive Dimension	Negative Dimension	Marital Adjust.	Marital Defens.	Social Des.
Age	-.00	.08	.03	.10	-.04
Education	-.15	-.04	.16	-.07	-.21
Vocabulary	-.09	.08	.13	-.07	-.13
Illness	-.07	.05	.01	.05	.23
Extroversion	-.18	.07	-.08	-.04	.14
Neuroticism	-.16	.08	-.12	-.09	.13
Positive Dimension	.27**	-.13	-.00	-.02	.17
Negative Dimension	-.10	-.01	-.01	-.02	-.11
Marital Adjustment	.34**	-.25*	.40***	.37**	.01
Marital Defensiveness	.33**	-.06	.20	.36**	.22
Social Desirability	.21	-.03	.22	.37**	.48***

Note 1: Coefficients with *** indicate significance at .05 level according to Bonferroni's Multistage criteria.

Note 2: N = 60 couples for the last three variables, N = 85 for all other variables.

*** $p < .001$, ** $p < .01$, * $p < .05$

well-being was significantly predicted by the set of difference scores variables (see Table 16). It appears that when spouses differed on vocabulary (verbal intelligence) and on marital adjustment, wives were likely to have higher scores on the negative dimension of well-being. The two predictors had approximately equal weights (Beta = .26 and .27) in predicting variance in the criterion scores.

The aforementioned hypothesis about differential responsiveness to spousal similarity was thus supported. Similarity, in terms of the variables measured in this study, was not related to husbands' well-being, but it had a small yet significant impact on the negative dimension of wives' well-being.

5) The statistical significance of differences between R's. The final statistical analyses applied to the data of this study were tests of significant differences between the multiple correlation coefficients (R) of the regression equations predicting husbands' well-being and those predicting wives' well-being. "R" represents the amount of variance in the criterion scores than is explained by the group of predictor variables. Fisher's Z test statistic (Howell, 1987) was applied to the three equations relating spousal variables and the three equations relating difference scores variables (similarity), to husbands' and wives' well-being. The results are presented in Table 17 and indicate that in 5 out of 6 pairs of regression equations, including 4 pairs of equations in which the wives' well-being was significantly predicted, "R" is significantly greater for the predictions of wives' well-being than for the predictions of husbands' well-being.

Table 16

Results of the Regression of Difference Scores Within Couples on Husbands' and Wives' Well-being (N = 60)

Criterion	R	R2	df	F	p
Global Well-being					
Husbands	.25	.06	5,54	.75	.59
Wives	.37	.14	"	1.70	.15
Positive Dimension					
Husbands	.24	.06	"	.65	.66
Wives	.27	.07	"	.85	.52
Negative Dimension					
Husbands	.24	.06	"	.68	.64
Wives	.44	.19	"	2.53	.04 *

* $p < .05$

Coefficients for the Negative Dimension of Wives' Well-being

Predictors	Beta #	r	sr_i
Age	.06	.16	.06
Education	-.02	-.00	-.12
Vocabulary	.26	.31	.26 *
Extroversion	-.10	-.08	-.10
Marital Adjustment	.27	.33	.25 *

Standardized regression coefficients

* $p < .05$

Table 17

Differences Between the Multiple Regression Coefficients (R) of Regression Analyses Predicting Husbands' and Wives' Well-being, (N =60)

Spousal Variables Predicting Global Well-being

	R	Z
Husbands	.29	16.31 *
Wives	.54	

Spousal Variables Predicting Positive Dimension of Well-being

	R	Z
Husbands	.32	13.70 *
Wives	.53	

Spousal Variables Predicting Negative Dimension of Well-being

	R	Z
Husbands	.26	15.88 *
Wives	.51	

Similarity Predicting Global Well-being

	R	Z
Husbands	.25	7.11 *
Wives	.37	

Similarity Predicting the Positive Dimension of Well-being

	R	Z
Husbands	.24	1.71
Wives	.27	

Similarity Predicting the Negative Dimension of Well-being

	R	Z
Husbands	.24	12.14 *
Wives	.44	

Notes: 1) The underlined R values indicate statistical significance for that regression equation.

2) Critical value of Z = + or - 1.96; * p <.05

Discussion

It was postulated in this study that traditional marital roles promote greater emotional responsiveness to spousal characteristics in women than in men. This differential sensitivity, along with other role elements, may explain the discrepancies in the mental health of married men and women, which generally favor men. This study tested the hypothesis of differential responsiveness to spousal variables and explored the relative importance of spousal variables with regard to the psychological well-being of older married couples.

The results of the statistical analyses provide strong support for the main hypothesis inasmuch as only husbands' own characteristics are significantly related to their well-being while the well-being of wives is associated with both their own and their husbands' characteristics. Spousal variables account for 29% of the variance in wives' global well-being scores but account for a statistically nonsignificant (8%) amount of variance in husbands' well-being scores.

Examination of the relative importance of spousal variables in predicting wives' well-being reveals that 3 of the 7 variables entered in the regression equations are significant predictors. They are, in order of importance: husbands' perception of marital adjustment, positive dimension of well-being and physical health. The remaining variables, i.e., the negative dimension of husbands' well-being, their personality characteristics (neuroticism and extroversion) and their level of education do not predict wives' well-being.

The most influential spousal variable is by far husbands' perception of the marriage. Thus, not only is the wives' own positive assessment of

the marriage beneficial to their well-being, so is their husbands' positive assessment. As mentioned above, the core roles of most married women are those of wives and mothers, while the core role of married men is that of provider. The psychological welfare of husbands and children, and by extension, the quality of the relationships within the family, have traditionally rested on women's shoulders. To the extent that one identifies with one's primary roles, the partner's satisfaction or dissatisfaction with the way these roles are fulfilled may enhance or threaten self-esteem and self-confidence. Thus, if the wives in this study were held or held themselves responsible for the marital relation, then their husbands' happiness or unhappiness with the marriage may have been perceived as a reflection of their competency, and consequently have affected their psychological well-being.

In considering the variables which are related to husbands' and wives' own well-being, it is interesting to note that marital adjustment is a strong correlate of global happiness for wives, which is consistent with previous research findings (Glen & Weaver, 1981; Gove, Hughes, & Styles, 1983), but it is only a marginally significant correlate of well-being for husbands. Among this sample of older men, enjoying good health or suffering from disease appears to be much more important for their psychological well-being than the quality of their marital relationship. Since the physical health status does not differ for the groups of husbands and wives in this study, it is plausible that the gender differences found in the physical health - psychological well-being relationship are attributable to the different interpretations made by men and women about health issues. In view of the shorter life expectancy of men and the

incapacitating nature of men's health problems, the importance of good health for men's sense of well-being may reflect a concern about death and disability. It may also be a result of men's tendency to interprete a reduction in physical vigor, associated with health decrements, as a blow to their physical image of masculinity (Nowak, cited in Turner, 1982). For older women, the importance of the marital relationship is not overshadowed by personal health concerns, perhaps because the meaning of illness carries for them less negative and drastic connotations.

The second most important spousal variable associated with wives' well-being is the positive dimension of husbands' well-being. This implies that women who live with pleasant, energetic and enthusiastic men tend to experience less negative affect. Conversely, women married to men who have low levels of energy and enthusiasm tend to be unhappy.

Again, the impact of husbands' level of happiness on their wives' well-being may be a consequence of the traditional assumption that wives are responsible for their mates' comfort and happiness. Studies have shown that with age, men do become more dependent on their wives for nurturance and have fewer other sources of social support (Grambs, 1989), thus reinforcing wives' caregiving role. However, as Barnett & Baruch (1987) have commented, since one has little control over the happiness of another person, wives find themselves in a situation which is potentially stressful: the demands are high and the degree of control is low.

The results of the analyses of the two separate dimensions of well-being reveal two subtle and interesting relationships, and help to elucidate how, in a couple, spousal levels of well-being are related. First, the positive dimension of husbands' well-being is only related to

the negative, not the positive, dimension of wives' well-being. It may be that wives perceive low energy and enthusiasm in their husbands as a state to which they must respond, a problem to resolve, in other words, a source of strain. Second, the negative dimension of husbands' well-being is not related to wives' positive or negative dimensions of happiness. Perhaps husbands' negative affect is more often perceived by both spouses as being the result of specific stressors (e.g., dissatisfaction with housing conditions) that lie outside of the wives' realm of expected responsibilities.

Husbands' physical health is the third most important contributor among the spousal variables predicting wives' well-being, but only indirectly, through its correlations with the first two significant spousal predictors, i.e, marital adjustment and the positive dimension of well-being. These results complement the findings of previous investigations that showed that the detrimental effects of husbands' ill health on their wives' well-being are experienced by the latter only to the extent that illness affects the husbands' morale (Atchley & Miller, 1983). In this study, husbands' illness is negatively related to their perceptions of the marriage and is the variable most strongly associated with their own level of psychological well-being. In contrast, while the wives are sensitive to the negative effects of illness on their husbands' well-being, their own ill health is not related to their level of marital satisfaction or general sense of well-being, thus replicating Haftrom & Schram (1984)'s findings.

In this study, there is no evidence of a direct relationship between the personality traits of spouses and their partners' psychological well-being. Furthermore, contrary to what would be expected from the findings

reported by Kelly & Conley (1987) on the relationship between personality traits at the beginning of marriage and marital compatibility in later life, the data reveal only a marginally significant correlation between the husbands' neuroticism and their level of marital adjustment and no correlation at all between these variables for the wives. It may be that having lived together for decades, older spouses have become very tolerant of each other's idiosyncracies. It is also likely that this sample was somewhat biased since on one hand, very maladjusted, neurotic individuals may have divorced before reaching retirement age, and on the other hand, unhappy couples were probably more likely than happy couples to refuse to participate together in a study on marriage.

Finally, education, which is highly correlated with verbal intelligence (.59 for men and .61 for women), is not associated, as a spousal variable, with well-being. How their partners feel, physically and emotionally, appears to contribute more to wives' well-being than their intellectual skills or level of education.

With regard to the relationship between personality traits and one's own level of psychological well-being, the results of this study only partly support previous findings reported by Costa & McCrae (1980) and Watson & Pennebaker (1989). Subjects' scores on the neuroticism dimension, but not on the introversion-extroversion dimension, are significantly correlated with their level of well-being.

A finding of interest which is related to the issue of differential responsiveness to spousal variables is that similarity between spouses explains variance in wives' but not in husbands' well-being. Specifically, the results indicate that married women experience less negative affect

when they share with their husbands similar perceptions of the marital relation. It may be that the knowledge that their husbands are as happy as they are with the marriage reassures the wives that their husbands are satisfied with them and therefore eliminates a possible stressor. It may also be that when both spouses acknowledge difficulties in their relationship, such agreement is construed by wives as a first step toward reconciliation. Conversely, it seems that incongruent perceptions of the marriage constitute a stressor for married women, which result in depressed affect.

Interestingly, similar levels of verbal intelligence also positively influence wives' well-being, but similarity in education, age and extroversion does not. A particular limitation of this analysis should be noted, however. The difference scores used as indices of similarity do not take into consideration the direction of the differences and further investigation would be needed to determine if the direction of the differences (e.g., wives more educated than husbands or vice versa) yield different results.

To evaluate the internal validity of the results of the present study, characteristics of the design must be considered to determine the extent to which the data are free of confounding factors. The methodology of this research project is fairly straightforward, consisting of reliable, standardized self-report questionnaires, most of which are widely used in research on marriage and aging. Response bias was effectively controlled through the use of two social desirability scales. Efforts were made to maintain constant testing conditions, for example by always administering the measures to each spouse separately and consecutively, on the same day.

Nevertheless, some variations in the environmental conditions were inevitable since some subjects (the majority) were tested in their homes, in the context of another study, and others were tested at the university; some testing took place in 1984, other testing in 1989-90; and several interviewers were involved in collecting the data.

One methodological issue is important to note, i.e., the two social desirability measures which were administered served very differently as covariate or control measures. The use of the Crowne-Marlowe Social Desirability scale, which measures general need for social approval, proved to be unnecessary since it shared very little variance with the well-being scales (MUNSH and Marital Adjustment). In contrast, the Jemail & LoPiccolo scale of Marital Defensiveness, which measures defensiveness specific to the marital relationship, was very useful in unmasking real differences between husbands and wives and in exposing the real impact of spousal variables on well-being. Not only did marital defensiveness influence responses on the Locke-Wallace Marital Adjustment scale, it also influenced responses on the MUNSH (well-being) and on the EPI (personality). These results suggest that social desirability is a situation specific rather than a generalized trait. In this sample of older couples, it seems that subjects felt free to describe their physical problems, but tended to be defensive about admitting marital dissatisfaction, perceived personal inadequacies and general unhappiness. Future research on marriage and aging may benefit from using a marital defensiveness measure which taps more effectively than a general social desirability scale into the need for social approval of a population of elderly couples.

The external validity of this study can be assessed by examining

whether the characteristics of the sample and the results of the study are consistent with the findings of prior researchers who studied the same variables in similar groups of subjects. The married couples who participated in this research project are of working and middle socioeconomic class, they are well educated, generally healthy and satisfied with their lives. While this sample may be somewhat priviledged in terms of education, it can be otherwise considered representative of the majority of the aged population. Indeed, Connidis (1989) recently found that in a random sample of 400 community-dwelling older person, the majority were not sick, dependent, isolated or unhappy. Most had a positive yet realistic outlook on their stage of life. Furthermore, the couples in this study present gender differences in terms of psychological well-being and marital adjustment which are consistent with previous investigations. Men have lower scores on the negative dimension of well-being and report more satisfaction with their marriage than women do. Contrary to expectations, there are no differences in the physical health of the men and women who participated in this research, but women did take more prescribed medication, which suggests greater use of medical services and perhaps more attention to their physical well-being.

In view of the overall internal and external validity of the results of this study, some theoretical and clinical implications can be derived from them. First, in relation to the original problem of discrepancies in the mental health of married men and women, which favor men, this study provides support for the explanation of differential emotional responsiveness to spousal variables, as proposed in this study. However, sensitivity to spousal variables does not inevitably lead to poorer mental

health. If married women are more sensitive, then marriage to a healthy, competent and supportive spouse should have a more positive and greater effect on well-being for a woman than for a man. Differential responsiveness implies a greater receptivity and potential to be influenced by other's characteristics and as such, it can be a source for development and growth as well as a source of distress, depending on the characteristics of both spouses.

Moreover, the degree to which differential responsiveness to spousal variables is a result of observable traditional marital roles or a reflection of sex-role attitudes is still an empirical question. It is possible that it is not differential sensitivity but marriage to a partner who considers that it is the other's function to do the socio-emotional work that creates greater difficulties for women with a traditional sex-role orientation. Consequently, to investigate the sex-role hypothesis more explicitly, a measure of sex-role attitudes should be included in future research, with younger cohorts of married couples who adhere to non-traditional, egalitarian marital roles.

A second important theoretical implication of this study is that while the results provide additional understanding of the relationships and relative importance of spousal variables for the psychological well-being of older wives, they reveal no information on characteristics of wives that might influence older husbands' well-being. It is surprising, for example, that the presence of physical illness and emotional distress in wives is not associated with husbands' well-being, as had been found in studies conducted by Atchley & Miller (1983) and by Krause & Markides (1987). More research is needed to resolve this problem. Future research designs might

also focus on other spousal variables that potentially influence older husbands' well-being. For example, financial dependence-independence and the personality traits of submissiveness-domination and nurturance might be included as spousal variables.

Finally, the clinical implication of the results of this study, which draw attention to the importance of marital adjustment for married women's well-being, are congruent with the conclusions reached by Gotlib & Whiffen (1989) in their work on depression and marital functioning. These authors recommended that in therapeutic interventions, the effect of depression on significant others be examined and treatment be undertaken within the interpersonal marital system. The findings of this research project similarly underscore the impact that husbands' physical illness is likely to have on the marital relation and on both spouses' psychological well-being. In a clinical context where elderly married people often present with both physical and emotional problems (Knight, 1986), the recommendation of therapeutic interventions with the two spouses becomes even more pertinent.

It is important to note that the sample in this study involved non-clinical subjects and that a measure of psychological well-being is not the equivalent of a measure of psychopathology, even if the measure of well-being used in this study (the MUNSH) has been shown to differentiate normal and psychiatric subjects. Consequently, the clinical implications mentioned above are only suggestive and need to be supported by data on spousal variables and the well-being of a clinical sample of older married persons.

In summary, this study supports previous empirical evidence suggesting

that older married women are more responsive to their spouses' global, marital and physical well-being than are older married men. It also provides new information on the relative contribution of spousal variables to the psychological well-being of wives, revealing the particular importance of husbands' perceptions of the marital relation. These findings contribute to a better understanding of the psychological realities underlying the differences between the mental health of older married men and women.

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Appendix A

Interview

WIFE INTERVIEW

1. Language _____
2. What is your birth date? _____ Your age _____
3. How long have you been married? _____
4. How many years of education do you have? _____
5. Are you currently employed? (Yes) _____ (No) _____
6. If yes, what is your occupation? _____
7. Did you ever work outside your home? (Yes) _____ (No) _____
8. If yes, full time? _____ part time? _____
9. What was your occupation? _____
10. For how many years did you work outside your home? _____

HUSBAND INTERVIEW

1. Language _____
2. What is your birth date? _____ Your age? _____
3. How long have you been married? _____
4. How many years of education do you have? _____
5. Are you currently retired? (Yes) _____ (No) _____
6. What is (was) your occupation? _____

Appendix B

The Marital Adjustment Test

Locke & Wallace, 1959

MARITAL-ADJUSTMENT TEST

1. Check the dot on the scale line below which best describes the degree of happiness, everything considered, of your present marriage. The middle point, "happy," represents the degree of happiness which most people get from marriage, and the scale gradually ranges on one side to those few who are very unhappy in marriage, and on the other, to those few who experience extreme joy or felicity in marriage.

. . . . . .

Very Unhappy | Happy | Perfectly Happy

State the approximate extent of agreement or disagreement between you and your mate on the following items. Please check each column.

	Always Agree	Almost Always Agree	Occasionally Disagree	Frequently Disagree	Almost Always Disagree	Always Disagree
2. Handling family finances						
3. Matters of recreation						
4. Demonstrations of affection						
5. Friends						
6. Sex relations						
7. Conventionality (right, good, or proper conduct)						
8. Philosophy of life						
9. Ways of dealing with in-laws						

10. When disagreements arise, they usually result in: husband giving in _____, wife giving in_____, agreement by mutual give and take_____.

11. Do you and your mate engage in outside interests together? All of them_____, some of them_____, very few of them_____, none of them_____.

12. In leisure time do you generally prefer: to be "on the go"_____, to stay at home_____? Does your mate generally prefer: to be "on the go"_____, to stay at home_____?

13. Do you ever wish you had not married? Frequently_____, occasionally_____, rarely_____, never_____.

14. If you had your life to live over, do you think you would: marry the same person_____, marry a different person_____, not marry at all_____?

15. Do you confide in your mate: almost never_____, rarely_____, in most things_____, in everything_____.

Appendix C

The Marital Defensiveness Scale for Males and Females

Jemail & LoPiccolo (1982)

Instructions

This questionnaire asks about your marital relationship. All your answers will be kept confidential, and will be seen only by the people responsible for this research project. Your answers should give an accurate picture of your relationship. Please answer truthfully.

Answer each question by completely crossing out the answer "True" or "False", which ever best applies to you at the time.

EXAMPLE:

Sometimes when I am tired I am short tempered with my mate.	T	F
If you feel this statement is mostly "True" about you, cross out "T" like this.....	T	F
If you feel this statement is mostly "False" about you, cross out "F" like this.....	T	F

Please answer all the questions, either T or F.

(Female Version)		True	False
1-	There are times when I wonder if I made the best of choices.	T	F
2-	Once in a while I make fun of my spouse.	T	F
3-	No matter what my spouse is saying, I'm always a good listener.	T	F
4-	I sometimes exaggerate my troubles in order to gain sympathy from my spouse.	T	F
5-	I have never been upset when my spouse expressed views very different from mine.	T	F
6-	I am careful to say something nice to my spouse every day.	T	F
7-	I can't imagine ever wanting to have an affair.	T	F
8-	On occasions I have had doubts about my ability to succeed in my marriage.	T	F
9-	When disagreements arise they are always settled in a peaceful, fair and democratic manner.	T	F
10-	There have been times when I felt like hitting my spouse.	T	F
11-	My mate occasionally makes me feel miserable.	T	F
12-	I have never felt my spouse was angry at me without a cause.	T	F
13-	I am always happy with how affectionate my spouse is to me.	T	F
14-	My mate completely understands and sympathizes with my every mood.	T	F
15-	I don't think any couple could live together with greater harmony than my mate and I.	T	F
16-	My mate and I understand each other completely.	T	F
17-	There are moments when I dislike my spouse.	T	F
18-	I never say anything bad about my spouse even to my close friends.	T	F
19-	I have never deliberately said something to hurt my spouse's feelings.	T	F
20-	I have never regretted my marriage, not even for a moment.	T	F

(Male Version)	True	False
1- No matter what my spouse is saying, I'm always a good listener.	T	F
2- I have never felt displeased with my spouse.	T	F
3- I have never been upset when my spouse expressed views very different from mine.	T	F
4- On occasions, I have had doubts about my ability to succeed in my marriage.	T	F
5- When disagreements arise they are always settled in a peaceful, fair and democratic manner.	T	F
6- There have been times when I felt like hitting my spouse.	T	F
7- I do not always tell my spouse the truth.	T	F
8- My mate occasionally makes me feel miserable.	T	F
9- I have never felt my spouse angry at me without a cause.	T	F
10- My mate completely understands and sympathizes with my every mood.	T	F
11- I don't think any couple could live together with greater harmony than my mate and I.	T	F
12- My mate and I understand each other completely.	T	F
13- There are moments when I dislike my spouse.	T	F
14- I never hesitate to go out of my way to help my spouse.	T	F
15- I confide in my mate about everything.	T	F
16- I have never deliberately said something to hurt my spouse's feelings.	T	F
17- I have never regretted my marriage, not even for a moment.	T	F
18- There is never a moment that I do not feel "head over heels" in love with my mate.	T	F
19- Some of my dealings with my mate are prompted by selfish motives.	T	F
20- I have some needs that are not being met by my marriage.	T	F

Appendix D

The Memorial University of Newfoundland Scale of Happiness

Kozma & Stones, 1983

We would like to ask you some questions about how things have been going. Please answer "Yes" if a statement is true for you and "No" if it does not apply to you.

In the past 12 months have you been feeling:

		Yes	No
1.	On top of the world?	____	____
2.	In high spirits?	____	____
3.	Particularly content with your life?	____	____
4.	Lucky?	____	____
5.	Bored?	____	____
6.	Very lonely or remote from other people?	____	____
7.	Depressed or very unhappy?	____	____
8.	Flustered because you didn't know what was expected of you?	____	____
9.	Bitter about the way your life has turned out?	____	____
10.	Generally satisfied with the way your life has turned out?	____	____

The next 14 questions have to do with more general life experience. (Last ten years).

11.	This is the dreariest time of my life.	____	____
12.	I am just as happy as when I was younger.	____	____
13.	Most of the things I do are boring or monotonous.	____	____
14.	The things I do are as interesting to me as they ever were.	____	____
15.	As I look back on my life, I am fairly well satisfied.	____	____
16.	Things are getting worse as I get older.	____	____
17.	Do you feel lonely?	____	____
18.	Little things bother me more this year.	____	____

		Yes	No
19.	I live where I want to live.	____	____
20.	I sometimes feel that life isn't worth living.	____	____
21.	I am as happy now as I was when I was younger.	____	____
22.	Life is hard for me most of the time.	____	____
23.	Are you satisfied with your life today?	____	____
24.	My health is the same or better than most people my age.	____	____

Appendix E

The Social Desirability Scale

Crowne & Marlow, 1964

ATTITUDES AND TRAITS INVENTORY

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

	True	False
1. Before voting I thoroughly investigate the qualifications of all the candidates.	___	___
2. I never hesitate to go out of my way to help someone in trouble.	___	___
3. It is sometimes hard for me to go on with my work if I am not encouraged.	___	___
4. I have never intensely disliked anyone.	___	___
5. On occasion I have had doubts about my ability to succeed in life.	___	___
6. I sometimes feel resentful when I don't get my way.	___	___
7. I am always careful about my manner of dress.	___	___
8. My table manners at home are as good as when I eat out in a restaurant.	___	___
9. If I could get into a movie without paying for it and be sure I was not seen, I would probably do it.	___	___
10. On a few occasions, I have given up doing something because I thought too little of my ability.	___	___
11. I like to gossip at times.	___	___
12. There have been times when I felt like rebelling against people in authority even though I knew they were right.	___	___
13. No matter who I'm talking to, I'm always a good listener.	___	___
14. I can remember "playing sick" to get out of something.	___	___
15. There have been occasions when I took advantage of someone.	___	___
16. I'm always willing to admit it when I make a mistake.	___	___
17. I always try to practive what I preach.	___	___

	True	False
18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.	____	____
19. I sometimes try to get even, rather than forgive and forget.	____	____
20. When I don't know something I don't at all mind admitting it.	____	____
21. I am always courteous, even to people who are disagreable.	____	____
22. At times, I have really insisted on having things my own way.	____	____
23. There have been occasions when I felt like smashing things.	____	____
24. I would never think of letting someone else be punished for my wrongdoings.	____	____
25. I never resent being asked to return a favor.	____	____
26. I have never been irked when people expressed ideas very different from my own.	____	____
27. I never make a long trip without checking the safety of my car.	____	____
28. There have been times when I was quite jealous of the good fortune of others.	____	____
29. I have almost never felt the urge to tell someone off.	____	____
30. I am sometimes irritated by people who ask favors of me.	____	____
31. I have never felt that I was punished without cause.	____	____
32. I sometimes think when people have a misfortune they only got what they deserved.	____	____
33. I have never deliberately said something that hurt someone's feelings.	____	____

Appendix F

The Eysenck Personality Inventory

Eysenck & Eysenck, 1968

EYSENCK

Here are some questions regarding the way you behave, feel and act. After each question, there is a space for answering "Yes" or "No".

Try and decide whether "Yes" or "No" represents your usual way of acting or feeling. Then check off the box under the column headed "Yes" or "No".

Work quickly and don't spend too much time over any question; we want your first reaction, not a long drawn-out thought process. The whole questionnaire shouldn't take more than a few minutes. Be sure not to omit any questions. Now turn the page over and go ahead. Work quickly and remember to answer every question. There are no right or wrong answers, and this is not a test of intelligence or ability, but simply a measure of how you behave.

E ( ) N ( ) L ( )

FORM A

		YES	NO
1.	Do you often long for excitement?	( )	( )
2.	Do you often need understanding friends to cheer you up?	( )	( )
3.	Are you usually carefree?	( )	( )
4.	Do you find it very hard to take no for an answer?	( )	( )
5.	Do you stop and think things over before doing any thing?	( )	( )
6.	If you say you will do something do you always keep your promise, no matter how inconvenient it might be to do so?	( )	( )
7.	Does your mood often go up and down?	( )	( )
8.	Do you generally do and say things quickly without stopping to think?	( )	( )
9.	Do you ever feel "just miserable" for no good reason?	( )	( )
10.	Would you do almost anything for a dare?	( )	( )
11.	Do you suddenly feel shy when you want to talk to an attractive stranger?	( )	( )
12.	Once in a while do you lose your temper and get anger?	( )	( )
13.	Do you often do things on the spur of the moment?	( )	( )
14.	Do you often worry about things you should not have done or said?	( )	( )
15.	Generally do you prefer reading to meeting people?	( )	( )
16.	Are your feelings rather easily hurt?	( )	( )
17.	Do you like going out a lot?	( )	( )
18.	Do you occasionally have thoughts and ideas that you would not like other people to know about?	( )	( )

		YES	NO
19.	Are you sometimes bubbling over with energy and sometimes very sluggish?	( )	( )
20.	Do you prefer to have few but special friends?	( )	( )
21.	Do you daydream a lot?	( )	( )
22.	When people shout at you, do you shout back?	( )	( )
23.	Are you often troubled about feelings of guilt?	( )	( )
24.	Are all your habits good and desirable ones?	( )	( )
25.	Can you usually let yourself go and enjoy yourself a lot at a lively party?	( )	( )
26.	Would you call yourself tense or "highly-strung"?	( )	( )
27.	Do other people think of you as being very lively?	( )	( )
28.	After you have done something important, do you often come away feeling you could have done better?	( )	( )
29.	Are you mostly quiet when you are with other people?	( )	( )
30.	Do you sometimes gossip?	( )	( )
31.	Do ideas run through your head so that you cannot sleep?	( )	( )
32.	If there is something you want to know about, would you rather look it up in a book than talk to someone about it?	( )	( )
33.	Do you get palpitations or thumping in your heart?	( )	( )
34.	Do you like the kind of work that you need to pay close attention to?	( )	( )
35.	Do you get attacks of shaking or trembling?	( )	( )
36.	Would you always declare everything at the customs, even if you knew that you could never be found out?	( )	( )
37.	Do you hate being with a crowd who play jokes on one another?	( )	( )
38.	Are you an irritable person?	( )	( )
39.	Do you like doing things in which you have to act quickly?	( )	( )
40.	Do you worry about awful things that might happen?	( )	( )
41.	Are you slow and unhurried in the way you move?	( )	( )
42.	Have you ever been late for an appointment or work?	( )	( )
43.	Do you have many nightmares?	( )	( )
44.	Do you like talking to people so much that you would never miss a chance of talking to a stranger?	( )	( )
45.	Are you troubled by aches and pains?	( )	( )
46.	Would you be very unhappy if you could not see lots of people most of the time?	( )	( )
47.	Would you call yourself a nervous person?	( )	( )

		YES	NO
48.	Of all the people you know are there some whom you definitely do not like?	( )	( )
49.	Would you say you were fairly self-confident?	( )	( )
50.	Are you easily hurt when people find fault with you or your work?	( )	( )
51.	Do you find it hard to really enjoy yourself at a lively party?	( )	( )
52.	Are you troubled with feelings of inferiority?	( )	( )
53.	Can you easily get some life into a rather dull party?	( )	( )
54.	Do you sometimes talk about things you know nothing about?	( )	( )
55.	Do you worry about your health?	( )	( )
56.	Do you like playing pranks on others?	( )	( )
57.	Do you suffer from sleeplessness?	( )	( )

Appendix G

The Revised Examination "M" (M-Test) - Vocabulary Subtest

EXERCISE

Draw a line under the word or phrase which explains best what the first word means.

1. DOG	tree	highway	animal	flag
2. GUN	for writing	for swimming	for fishing	for shooting
3. FAST	quick	heavy	ready	soft
4. SAILOR	policeman	seaman	milkman	truck-driver
5. PUDDLE	large house	sharp knife	pool of water	bright light

TEST 7

1. CHEESE	money	hat	house	food
2. BLONDE	dark-haired	weak-minded	quick-tempered	fair-haired
3. CLOAK	noise	joy	dress	help
4. FUEL	for eating	for walking	for burning	for opening
5. CYCLONE	storm	wheel	drug	giant
6. TONSIL	machine	on the road	in the mouth	weight
7. JESTER	butcher	joker	jeweller	grumbler
8. FRACTURE	force	break	fall	cut
9. REGIME	government	vegetable	country	queen
10. JEOPARDY	beast	danger	candy	pleasure
11. ZENITH	old man	fine thread	small stone	high point
12. DISCLOSURE	doorway	statement	rule	covering
13. INDIGO	colour	island	tribe	finger
14. SEISMOGRAPH	for navigation	for finances	for earthquakes	for electricity
15. SUPERFLUOUS	fluid	extra	excellent	strong
16. ENIGMA	insect	puzzle	dream	flag
17. ASSET	attitude	young donkey	property	poor man
18. ELIMINATE	remove	make	enquire	copy
19. INTREPID	imperfect	rapid	feeble	brave
20. ACRIMONY	bitterness	vegetable	crime	poverty
21. DIFFIDENCE	kindness	shyness	difference	size
22. INHIBIT	to hope	to throw	to stop	to drink
23. CHRONOMETER	paper	compass	thermometer	clock
24. ABRIDGE	to weaken	to jump over	to shorten	to give up
25. IMMACULATE	contented	unfriendly	spotless	young
26. CERAMICS	carpentry	drapery	history	pottery
27. PLATITUDINOUS	noisy	woven	ordinary	faulty
28. PREHENSILE	grasping	pushing	dividing	smoothing
29. TURPITUDE	wickedness	good fortune	water animal	grease
30. PILOSE	dirty	hairy	round	soft

Appendix H

The Seriousness of Illness Rating Scale

Wiler, Masuda & Holmes (1971)

Instructions: Please check those symptoms or diseases you have experienced in the past 2 years.

Item Number	Disease Items	
1.	Headache	
2.	Dizziness	
3.	Varicose veins	
4.	Hemorrhoids	
5.	Low blood pressure	
6.	Drug allergy	
7.	Bronchitis	
8.	Hyperventilation	
9.	Bursitis	
10.	Lumbago	
11.	Migraine	
12.	Hernia	
13.	Gonorrhea	
14.	Irregular heart beats	
15.	Overweight	
16.	Anemia	
17.	Anxiety reaction	
18.	Gout	
19.	Pneumonia	
20.	Depression	
21.	Kidney infection	
22.	Inability for sexual intercourse	
23.	Hyperthyroid	
24.	Asthma	
25.	Glaucoma	
26.	Sexual deviation	
27.	Gallstones	
28.	Arthritis	
29.	Syphilis	
30.	Slipped disk	
31.	Hepatitis	
32.	Kidney stones	
33.	Peptic ulcer	
34.	Pancreatitis	
35.	High blood pressure	

Item No.	Disease Items	
36.	Deafness	
37.	Collapsed lung	
38.	Epilepsy	
39.	Chest pain	
40.	Nervous breakdown	
41.	Diabetes	
42.	Blood clot in blood vessels	
43.	Hardening of the arteries	
44.	Emphysema	
45.	Tuberculosis	
46.	Alcoholism	
47.	Drug addiction	
48.	Cirrhosis of the liver	
49.	Parkinson's disease	
50.	Blindness	
51.	Stroke	
52.	Muscular dystrophy	
53.	Cerebral palsy	
54.	Heart failure	
55.	Heart attack	
56.	Brain infection	
57.	Multiple sclerosis	
58.	Bleeding in the brain	
59.	Uremia	
60.	Cancer	
61.	Leukemia	
62.	Cataracts	
63.	Prostectomy	
64.	Difficulty in focussing vision	
65.	Rheumatism	
66.	Other (specify; eg. colour blindness)	

Names of current prescription meds and dosage	Purpose of meds

Non-prescription drugs taken regularly:_____

Appendix I

Consent Form

CONSENT FORM

I, _____, consent to participate in the study on factors of well-being in long-standing marriages, which is being conducted by Cécile Quirouette, a graduate student in psychology, at the Centre for Research in Human Development of Concordia University.

A. With respect to the study itself, I understand that:

My involvement in the study will consist of answering some questionnaires which deal with health, personal attitudes, marital relations, vocabulary knowledge and general well-being.
This information will supplement similar information being given by my spouse.

B. With respect to my participation in the study, I understand that:

1. Any information learned about me and my spouse through my responses to the questionnaires will be confidential. The results of the study will be available only to the researcher, who may use the results for scientific purposes such as publication in a scientific journal or presentation at a scientific meeting, as long as I am not identified as a participant in the study.

2. I will receive a full explanation of the findings of the study when they become available.

3. Participation is completely voluntary and I may withdraw from the study at any time.

Date: _____ Signature: _____

Appendix J

Acknowledgment of Payment Form

ACKNOWLEDGMENT OF PAYMENT FORM

I acknowledge that I have received the amount of $5.00 (five dollars) for my particiapation in this research project.

Name (printed) _____

Signature _____

Witness's signature _____

Date _____

Appendix K

Results of the Multivariate Analyses

(Tables A to E) for the total Sample (N = 85)

Table A

Multiple Regression Coefficients for Husbands' and Wives Global Well-being, with their Own Variables as Predictors (N = 85)

Variables	Beta #	r	sr_i
	Husbands' Well-being		
Education	.04	.23	.04
Illness	-.42	-.55	-.37 ***
Extroversion	.03	-.02	.04
Neuroticism	-.26	-.45	-.23 **
Note: R = .60, R2 = .36, F(4,80) = 11.17, p <.000			
	Wives' Well-being		
Education	.00	.13	.00
Illness	-.18	-.35	-.16
Extroversion	.13	.01	.13
Neuroticism	-.50	-.55	-.45 ***
Note: R = 59, R2 = .34, F(4,80) = 10.52, p <.000			

Standardized regression coefficients

*** p <.001, ** p <.01, * p <.05

Table B

Univariate Analyses of Variance for Mean Differences Between Husbands and Wives, Without Adjusting for Marital Defensiveness

Effect	Dependent Variable	F (1,168 df)
Gender	Age	9.44**
	Education	.35
	Vocabulary	4.68*
	Illness	1.40
	Extroversion	.54
	Neuroticism	10.88***
	Positive Dimension	.01
	Negative Dimension	3.17

Effect of gender: $F = 4.16$, $p = .000$

*** $p < .001$, ** $p < .01$, * $p < .05$

Table C

Multiple Regression Coefficients for Wives' Global Well-being, with their Husbands' Variables as Predictors (N = 85)

Predictor Variables	Beta #	r	sr
Education	-.13	-.06	-.12
Illness	.00	-.07	.00
Extroversion	-.15	-.14	-.15
Neuroticism	-.13	-.13	-.11
Positive Dimension	.35	.23	.27
Negative Dimension	.22	-.04	.15

R = .33, R2 = .11, F(6,78), p <.13

Standardized regression coefficients

Table D

Multiple Regression Coefficients for the Two Dimensions of Wives' Well-being, with their Husbands' Variables as Predictors (N = 85)

Predictor Variables	Beta #	r	sr
Positive Dimension			
Education	-.24	-.15*	-.23 *
Illness	.01	.07	-.00
Extroversion	-.20	-.18	-.20
Neuroticism	-.13	-.16	-.11
Positive Dimension	.38	.27	.29 **
Negative Dimension	.16	-.10	.11
R = .43, R2 = .18, F(6,78) = 2.89, p <.01			
Negative Dimension			
Education	-.01	-.04	-.01
Illness	.00	.05	.00
Extroversion	.07	.07	.07
Neuroticism	.10	.08	.08
Positive Dimension	-.23	-.13	-.18
Negative Dimension	-.21	-.01	-.15
R = .22, R2 = .05, F(6,78) = 0.66, p <.68			

Standardized regression coefficients
** p <.01. * p <.05

Table E

Summary of Results of Multiple Regression Analyses for Husbands' Well-being, with their Wives' Variables as Predictors (N = 85)

Criterion	R	R2	df	F	p
Global Well-being	.29	.08	8,51	.57	.80
Positive Dimension	.33	.11	"	.77	.63
Negative Dimension	.27	.07	"	.49	.86

Table F

Results of the Regression of Difference Scores Within Couples on Husbands' and Wives' Well-being (N = 85)

Criterion	R	R2	df	F	p
Global Well-being					
Husbands	.14	.02	4,80	.43	.79
Wives	.17	.03	"	.62	.65
Positive Dimension					
Husbands	.20	.04	"	.81	.52
Wives	.10	.01	"	.19	.94
Negative Dimension					
Husbands	.10	.01	"	.21	.93
Wives	.27	.07	"	1.54	.20