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Marital interaction and spousal health and well-being

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AN ABSTRACT OF THE THESIS OF Ralph Arthur Schmoltdt for the Master of Arts in Sociology presented June 21, 1982.

Title: Marital Interaction and Spousal Health and Well-Being.

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An attempt is made to determine whether marital interaction is related to the health and well-being of husbands and wives and, if such a relationship exists, to explore the nature of the relationship. The dimensions of marital interaction of interest include cohesion, companionship, cooperation, and consensus. Cohesion is manifest in the feelings a couple has about their relationship. Companionship and cooperation are seen in a couple's joint activities. A shared outlook on life represents consensus.

A subset of a random sample of members of the Oregon Region of the Kaiser-Permanente Medical Care Program, including 988 legally married couples who represent a broad range of sociodemographic characteristics, provided the study population and data.

Two data sources were utilized: a household interview survey and an outpatient information system. The survey, which involved separate but simultaneous interviews with the husband and wife using two interviewers, was conducted under the supervision of the Kaiser-Permanente Health Services Research Center for a variety of research purposes. It elicited a wide range of demographic, health, behavioral, and attitudinal information. The marital interaction variables are measured by combining spouses' responses to various survey questions. Other survey questions were used to develop a measure of health (general health status), two measures of well-being (self-esteem, mental health status), and five control variables (socioeconomic status, education, age, childhood health, and duration of marriage). The outpatient information system records all medical care contacts (including doctor office visits, emergency room use, telephone calls, and correspondence) and associated diagnoses and treatments for each health plan member. Morbidity information from patient records is converted to a code in the Kaiser Clinical-Behavioral Classification System. Four disease classes within this classification system are used to provide additional measures of health (chronic disease, trauma,

of health (chronic disease, trauma, acute disease, and emotion-related disease). The survey was conducted approximately in the middle of the period during which medical record data was collected for most of the respondents (ranging from two to seven years).

After examining interrelationships among the dependent, independent, and control variables using cross-tabulational and correlational analysis, a series of stepwise multiple regression analyses are performed to determine the relative importance of the marital interaction and control variables in explaining variance in the health and well-being measures.

Although the amount of variance explained is small, the findings provide some support for the hypothesis that better health is associated with higher levels of marital interaction, particularly cohesion. There is some suggestion that marital interaction has a greater influence on the health of husbands than wives, but the difference is slight. Measures of health and well-being which tend to be more emotion-sensitive (self-esteem, mental health status, trauma, and emotion-related disease) are those most likely to be influenced by the marital relationship. The effect of marital interaction on health and well-being is also independent of the health status one brings to a marriage.

These results and the implications for family life education are discussed and suggestions for future research are made.

MARITAL INTERACTION AND SPOUSAL
HEALTH AND WELL-BEING

by
RALPH ARTHUR SCHMOLDT

A thesis submitted in partial fulfillment of the
requirements for the degree of


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TO THE OFFICE OF GRADUATE STUDIES AND RESEARCH:

The members of the Committee approve the thesis of
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CHAPTER I

INTRODUCTION

While many researchers have presumed that social support is important in the promotion of health and well-being, there is little strong empirical evidence to confirm the role it plays. In particular, the interactional aspects of marriage through which some of the most personally meaningful social support mechanisms operate have received almost no attention in the literature. This void is especially significant in view of the fact that an overwhelming proportion of men and women prefer marriage as a way of life (96% of the women and 92% of the men, the Roper Organization, 1974); the affectivity and emotionality of contemporary marriage imposes a tremendous burden on husbands and wives (Parsons and Fox, 1952); and, an expanding literature demonstrates the significance of the socioemotional environment for health (Insel and Moos, 1974).

Cohesion, companionship, cooperation, and consensus are the marital interaction dimensions of interest in this study. Cohesion is manifest in the feelings a couple has about their relationship. Companionship and cooperation are seen in a couple's joint activities, especially during

leisure. A shared outlook on life represents consensus. Given these aspects of the marital relationship, this thesis will address the following questions:

- Are higher levels of marital cohesion, companionship, cooperation, and consensus related to higher levels of health and well-being? Which marital variable(s) appear(s) to be more important?
- Is the health and well-being of wives more likely to be affected by marital cohesion, companionship, cooperation, and consensus than the health and well-being of husbands?
- Are diseases with a high emotional content more likely to reflect variation in marital cohesion, companionship, cooperation, and consensus than other types of illness?
- Is the influence of marital cohesion, companionship, cooperation, and consensus on health and well-being independent of the effect of health and well-being on these marital variables?

Responses to these questions will define which elements of marriage might be strengthened for the greatest benefit to personal health and well-being.

The two major theoretical paradigms in sociology are reviewed first because they serve as the framework for the literature review and research design which follow. One of the paradigms, social factism, is important to the extent that it demonstrates the importance of marital interaction by noting the effect of its absence. The other, social definitionism, is more directly related to the research questions above.

THEORETICAL FOUNDATIONS

The Social Factist Tradition

The social factist paradigm generally assumes that what sociology ought to study are phenomena that are external to individuals and have a coercive influence on the actions of individuals. Social facts include norms, roles, customs, rites, rates of various behaviors, and so forth. They are assumed to have a reality that is independent of any individual and can thus be studied in essentially the same fashion as material objects. Within this paradigm, the sociologist is supposed to relate social facts to one another, explaining the existence of any one with reference only to others, thereby avoiding psychological, biological, or other types of "reductionism", that is, explanations of social facts by reference to nonsocial phenomena. Stated another way, human collectivities are assumed to have a reality that is separate and distinct from individuals. They are capable of being studied independently and comprise the subject matter of sociology. (Chafetz, 1978:38)

The classic study in the social factist tradition is Durkheim's Suicide (1951). Of particular interest here is his work using marital status as a primary social fact to account for variation in suicide rates. Using data from a number of European countries, he discovered that married persons, both husbands and wives, had a lower rate of suicide in comparison to unmarried persons. Widowed persons had a higher rate of suicide than those who were married but a lower rate than both the divorced and the unmarried.

In explaining his findings Durkheim considered both a "selection" hypothesis and a "protection" hypothesis. On the basis of his data, he ruled out "selection" which

claimed that those admitted to marriage and family life already have "considerable guarantees of physical and moral health" leaving the unmarried to form a class composed of "the human dregs of the country" (1951:180). According to this view, lower rates of suicide among the married would be expected.

The "protection" hypothesis, Durkheim's preference, claimed that there was something in domestic life that protected people from suicide. This something, in his view, was the social support that results when one is strongly integrated into a family group. In his words, husbands and wives,

...cling to life more resolutely when belonging to a group they love, so as not to betray interests they put before their own. The bond that unites them with the common cause attaches them to life and the lofty goal they envisage prevents their feeling personal troubles so deeply. There is, in short, in a cohesive and animated society a constant interchange of ideas and feelings from all to each and each to all, something like mutual moral support, which instead of throwing the individual on his own resources, leads him to share in the collective energy and supports his own when exhausted. (1951:209)

While marriage itself has a limited preservative effect for husbands, Durkheim demonstrates that it is primarily the wider family group which includes children that offers the greatest suicide protection for both husbands and wives. Moreover, "immunity" is shown to increase with increasing size of the family unit.

Durkheim's findings have been supported and extended in recent studies using mortality and morbidity rates as well as suicide rates as the dependent variable. The mortality rate is lower for married persons than for divorced, widowed, or single persons of the same age and sex (Zalocar, 1960; Sheps, 1961; Berkson, 1962; Verbrugge, 1979). Newly widowed men are a particularly vulnerable group (Kraus and Lilienfeld, 1959), although remarriage appears to increase the widowed man's chances of living longer (Greenberg, 1981). In terms of morbidity rates, those who divorce are more likely than the happily married to report physical disability, chronic illness, neurosis, depression, and isolation (Renne, 1971; Pearlin and Johnson, 1977; Gove, 1972, 1973; Kobrin and Hendershot, 1977; Blumenthal, 1967; Lattorgue, 1960; Berkman, 1969). Divorced and separated people also have higher rates of acute and chronic conditions and disabilities in comparison to widowed people and single people (Verbrugge, 1979). Morbidity rates are higher for formerly married women (divorced, separated, widowed) than men (Verbrugge, 1979).

Renne's findings (1971) indicate that marital status in itself does not necessarily protect one from illness. Rather, it is the quality of a marriage which may be more important. While many studies show that married people are happier than persons in any other marital status category (Bradburn, 1969; Glenn, 1975; Gurin et al., 1960), Renne

found that unhappily married people are "worse off" than single, divorced, or separated people in terms of psychological and physical health.

Social factists stress the importance of marital status for the preservation of health. It is because of the importance of marital quality, however, that the perspective of the social definitionists must be considered.

The Social Definitionist Tradition

The social definitionist paradigm generally assumes that what sociology ought to study are human actions to which the individual actors attach subjective meaning and in which the individual takes into account the actions of other humans (whether or not they are present). The emphasis in this paradigm falls on the subjective states of interacting individuals, who are often viewed as creating their own social reality.... The questions raised thus tend to be those pertaining to how people perceive and interpret others and themselves in a social context.... (Chafetz, 1978:38-39)

Symbolic interactionism has emerged as a perspective within the social definitionist tradition. Instead of focusing on the individual and his or her personality characteristics, or how the social structure or social situation causes individual behavior, symbolic interactionism focuses on the nature of interaction. In doing so, a more active image of the human being is created which stands in definite contrast to the image of the passive, determined organism (Charon, 1979).

Although not himself a symbolic interactionist, Max Weber is the classical figure in sociology who is considered to be the conceptual father of interactionist theory. It was Weber who argued that human action was, on the whole, "meaningful", involving interpretation, thinking and intention (Charon, 1979:23). For Weber, interaction meant that people's minds were actively involved in situations, interpreting each other, communicating with each other, controlling their own acts according to what they wish to communicate to others (Charon, 1979).

Because, as noted earlier, the quality of marital interaction has consequences for health and well-being, symbolic interactionism provides a highly suitable theoretical framework for examining this relationship. E.W. Burgess, one of the more significant contributors to early research on marriage and family life, in fact defined family unity in terms remarkably similar to those used by contemporary symbolic interactionists:

The family as a unit of communicating personalities involves the fitting together of reactions and attitudes of husband and wife which have a history reaching back to the early months and years of each person's life. These persisting attitudes and values act as a selective factor in sensitizing each person to pay attention to objects, values, and situations similar to those previously experienced. The basic principle, however, is that persons undergo modification in the process of communicative interaction within the family. Thus, through communication, particularly of the intimate type found in most families, there is an interpenetration and fusion of the attitudes of husband and wife and of parents and children, for in their

reciprocal responses the members continually modify one another's behavior. (Burgess et al., 1963:267)

For Burgess, marital integration involved interaction that complemented each partner in order to provide mutual satisfaction and the achievement of common objectives. Such interaction involved intercommunication, interstimulation, and participation in common activities (Burgess et al., 1963).

That husband and wife both define their marital situation as satisfying or "happy" is extremely important to maintaining marriage as a system of interacting roles and communication networks. Given the fact that shifts in communication and/or role patterns are likely to influence an alteration in adjustment patterns and in perceived satisfaction in the marital relationship, common activities also become critical in maintaining the marriage system. It is during periods of joint activity, especially in leisure time, that husbands and wives are more free to redefine their situations and open themselves to new behavioral interpretations (Orthner, 1975). Both happiness (cohesion) and joint activity (companionship) as well as shared definitions (consensus) and cooperative interaction (cooperation) are included in this thesis as primary elements which affect the quality of marital interaction and which, in turn, influence spousal health and well-being.

CHAPTER II

REVIEW OF THE LITERATURE

The literature is reviewed first from the perspective of the independent variable (marital interaction) with special emphasis on findings relevant to an interest in cohesion, companionship, cooperation, and consensus; and then from that of the dependent variable (health and well-being). A theoretical model of the relationship between the social environment and health is presented to provide a context for reviewing the evidence which links marital interaction to health. A great deal of attention is given to the effect of sociodemographic factors (primarily socioeconomic status, age, and sex) on both the marital relationship and health and well-being to determine the need for controlling these factors in this research. Finally, the research questions are rephrased in terms of anticipated results.

THE MARITAL RELATIONSHIP

Over the years a variety of terms have been used to describe the interactional character of the marital relationship. Burgess spoke of marital "success" and used eight criteria to define this concept: permanence,

happiness, satisfaction, sexual adjustment, marital adjustment, integration, consensus, and companionship (1939:290). Locke (1951) used a similar combination of factors which, taken together, referred to marital "adjustment." In more recent studies adjustment and success have largely been supplanted by the term "satisfaction." Currently, marital "quality" is the concept which seems to be the preferred choice of marriage and family researchers. Each of these broad terms essentially refers to a similar set of specific marital variables. Among others, the set usually includes the marital variables of interest in this study; namely, companionship/cooperation ("common interests and activities"), consensus ("agreement and settlement of disagreements"), communication ("demonstration of affection and confiding"), and cohesion ("feelings of happiness and togetherness").

While it has been deemed inadequate by some to employ any one of these variables to represent the many facets of the marriage relationship, "happiness" has often been used as a single criterion of a successful marriage. Critics of this approach, while acknowledging that marital happiness does represent a subjective expression of affect which is culturally considered to be the result of a "good" marriage, indicate that happiness is not the only cultural goal of marriage. This observation notwithstanding, simple marital happiness measures have been shown to be positively

correlated with more complex marital satisfaction scales (Luckey, 1964). This suggests that simple measures of self-rated marital happiness may be tapping the same phenomenon that many-itemed adjustment inventories or satisfaction scales do. Marital "happiness" might therefore be added to the list of general terms which describe the interactional character of a marriage.

General measures of marital satisfaction and happiness should not be confused with the use of these terms in evaluating very specific features of married life. Asking a person to rate the extent to which his/her marriage is happy is conceptually distinct from asking him/her to specify the specific sources of happiness in marriage (see, for example, Gurin, et al., 1960). Similarly, satisfaction with marriage is conceptually distinct from satisfaction with specific aspects of marriage such as sex life, amount of time spent in conversation, etc. (see, for example, Scanzoni, 1970). When either or both of these terms (happiness and satisfaction) have a specific referent, they may no longer be positively correlated. For example, there may be dissatisfaction with leisure activities even though the overall marriage is rated "extremely happy." Likewise, unhappiness with finances or dissatisfaction with the amount of affection shown may not necessarily detract from general marital satisfaction. Burgess (1939) was probably

the first to make such a distinction between marital happiness and satisfaction.

Husbands and wives who are happy with marriage tend to stress aspects of their relationship rather than situational features of their marriage (home, children, social life, etc.) as the primary sources of their happiness. And, contrariwise, husbands and wives who are unhappy with their marriage tend to focus on situational sources of unhappiness (Gurin et al., 1960; Burke and Weir, 1977). To a considerable degree, then, happiness in marriage appears to imply happiness in the relationship.

Higher levels of education and socioeconomic status are consistently associated with greater marital satisfaction and adjustment (Blood and Wolfe, 1960; Geismar, 1973; Winch, 1963; Luckey, 1966; Roth and Peck, 1951; Locke, 1951; Terman, 1938; Burgess and Cottrell, 1939). Relationships in which the status of husband and wife are approximately equal contribute to greater satisfaction than those in which the wife has a considerably higher or lower status (Blood and Wolfe, 1960; Roth and Peck, 1951).

As the length of marriage increases, the intimacy of the marriage relationship declines as does overall marital satisfaction (Feldman, 1964; Blood and Wolfe, 1960; Luckey, 1966). In terms of stages in the marital career, the drop in satisfaction is particularly evident following the birth of the first child (Blood and Wolfe, 1960; Pineo, 1961;

Gurin et al., 1960; Paris and Luckey, 1966), although the timing of the decline is difficult to pinpoint. Burr (1970) sees the decline occurring when the oldest child is somewhere between age six and age twelve. Feldman (1964), in agreement with Burr, claims that this period is likely to produce the highest level of stress of any stage in marriage. Although childless couples also experience a decline in satisfaction over time, their stated marital satisfaction is higher than that of couples with children (Feldman, 1964). In the later years of marriage, satisfaction with the relationship makes something of a comeback; although the level of satisfaction is not nearly so high as it was in the honeymoon period (Feldman, 1964; Rollins and Cannon, 1974; Rollins and Feldman, 1970).

Feldman offers this explanation of the "disenchantment" (term from Pineo, 1961:9) process:

...at the beginning of the marriage, reactivity, sexual relations and enchantment with knowing the other increases affectivity toward the other. The stress periods, near the middle of marriage, have a continuing high enchantment level but there is the beginning of disillusionment with the other as filling the romanticized ideal. Near the end of marriage the couple comes to grips with marriage and begins to accept the other more realistically. Companionship as a value begins to supercede the affective romantic orientation and satisfaction increases. (1964:126)

Regardless of how quickly the romanticized ideal fades, Jordan (1976) points to the fact that the middle stages of marriage present the developmental challenges of parenting (usually for wives) and career development (usually for

husbands). These challenges strain a couple's ability to provide companionate interaction for one another. The experience of childbearing and childrearing has in fact been demonstrated to have a more negative impact upon the marital satisfaction of wives than husbands. The satisfaction level for husbands, on the other hand, is much more influenced by their occupational experiences (Rollins and Feldman, 1970).

Satisfaction with marriage is not simply dependent upon the degree of companionate interaction between spouses. It relates to the different meanings which marriage has for men and women. Marriage in our society, according to Bell,

...remains a key mechanism for validating personal adequacy, heterosexual normality and personal maturity. Since women are denied alternative areas for social validation (notably in careers) - marriage may be more often needed by them than by men. (1972:69)

Research seems to support this interpretation. Rollins and Feldman (1970) reviewed twelve studies of the decline in marital satisfaction over time and noted that the decline was more characteristic of wives than husbands. Hawken (1968) showed that socioemotional factors are somewhat more crucial to the marital satisfaction of wives in comparison to husbands. Wives also place more emphasis on affective values, are more likely to feel more stress, and experience a wider range of emotionality in marriage (Feldman, 1964). Such differences may partially account for why correlations

(ranging from .36 to .59) between marital happiness scores of husbands and wives are high but not too high (Terman, 1938; Terman and Oden, 1947; Burgess and Wallin, 1944; Locke, 1951).

Scanzoni's (1970) three dimensions of primary interaction in marriage provide a basic framework for describing the marital variables to be used in this study. The affective dimension stresses the emotional involvement of the partners in all aspects of displaying love and affection and the vicarious experience of the feelings, thoughts, or attitudes of the other (1970:108). The affiliative dimension stresses "doing things together" during leisure time or engaging in joint activity (1970:26). The third, or cognitive, dimension focuses on mutual identification with "the verbal and intellectual elements inherent in the use of overt symbols of communication and understanding" (1970:26). Empathy, which includes the reciprocal skills of communication and understanding, is at the core of the cognitive dimension and is considered crucial to the solidarity of the conjugal unit. The three dimensions overlap but there is no necessary correlation between them. A review of the literature relevant to these dimensions follows.

The Affective Dimension

Feelings of happiness and the nature of communication in marriage are considered here to closely reflect Scanzoni's affective dimension of interaction.

Relationship of Happiness to Sociodemographic Variables. The relationship of marital happiness to social class and education parallels the findings for the relationship of marital satisfaction and marital adjustment, i.e., higher educational and social class levels are associated with greater happiness. Interestingly, the more highly educated not only report greater marital happiness but also more problems with marriage and a greater sense of inadequacy with the spousal role (Gurin et al., 1960). Education may not only make one more introspective, thereby increasing one's awareness of the intrinsic aspects of marriage, but may also increase one's expectations for what a marriage should be. Feelings of inadequacy may result when the expectations are unmet (Gurin et al., 1960).

Marital happiness declines along with marital satisfaction and marital adjustment the longer a couple is married (Terman, 1938; Dizard, 1968).

Husband-Wife Differences in Happiness. Women are somewhat unhappier and report more problems in their marriages than men (Gurin et al., 1960). Since the feminine role has been traditionally more associated with the maintenance of family cohesiveness, women may be more

attuned to the socioemotional climate of marriage. Their standards for happiness may therefore be higher. In addition, women have greater permission in our culture to admit to difficulties. Men, in contrast, are less likely to experience and show feelings that indicate failure in coping with their environment (Gurin et al., 1960). Nevertheless, the real stresses of marriage encountered by women should not be underestimated.

Relationship of Empathy to Marital Satisfaction.¹

Another aspect of the affective dimension of marital interaction is empathy which includes communication and understanding. Although "just plain talk" between husbands and wives occurs relatively infrequently (Bernard, 1964:33), it is one aspect of marriage that seems to improve over the years. The longer a marriage continues, the more satisfactory empathy becomes in the view of both sexes; a fact which appears to be true even when marital happiness wanes (Scanzoni, 1970). Communication and listening skills take years to develop and are something a couple can fall back on when leisure activities and physical affect lose their charm (Scanzoni, 1970). An

¹Scanzoni's cognitive dimension of primary interaction, which emphasizes empathy, contains both affective and cognitive elements. The affective contributions of empathy seem especially relevant to the discussion at this point. The discussion of the cognitive dimension later will focus more narrowly on the intellectual and more purely cognitive characteristics of marital interaction.

increase in verbal communication among older persons whose children have left home has been noted (Feldman, 1964).

On the average, middle and upper-class couples spend one and one-half hours per day in conversation, with the wife initiating discussions of most topics except for the husband's work. Although most topics seem to foster cohesion, the most cohesive effects result from conversations about intra-familial topics (personal feelings, sex, children's problems, etc., Feldman, 1964). The more time couples report that they spend talking with each other, the more likely they will also report a high level of marital interaction, marital satisfaction, and positive affect after discussions (Feldman, 1964). Couples expressing greater marital satisfaction disclosed their feelings to one another more, showed more sensitivity to one another's feelings, conveyed an understanding of one another's communications, and communicated on a wider range of subjects than those dissatisfied with their marriages (Burke and Weir, 1977).

Relationship of Empathy of Sociodemographic Variables. Empathy increases with increasing social class and education. The higher the status of the husband's job, the greater the degree of communication with the wife regarding his job (Scanzoni, 1970). For less successful males, who seemingly have "a trained incapacity to share," "silence is golden" but their wives expect more

communication (Scanzoni, 1970:120-121). Extremely educated persons (sixteen or more years of formal education) also talk less with their spouse (Scanzoni, 1970).

The Affiliative (Activity) Dimension

Companionship is the term which is most often used to refer to the affiliative or activity dimension of primary interaction. It has been ranked by husbands and wives as the most valued aspect of married life (Blood and Wolfe, 1960; Feldman, 1964) and has been seen as the primary basis for marital satisfaction because of its tension management function (Hawkins, 1968). Wives rank companionship more highly than husband's employment and income in terms of its contribution to marital quality (Geismar, 1973).

Broadly defined, companionship describes contemporary marriage in which expressive behavior is emphasized in contrast to traditional marriage which placed more emphasis on instrumental functions (Bell, 1972; Burgess et al., 1963). The more limited focus here, however, will be on shared activity (both expressive and instrumental) which is the conventional way of operationalizing companionship in the literature.

Activity Classifications. Joint marital activity has been classified in various ways. Some researchers make a distinction between "companionship" and "sociability" (Orden and Bradburn, 1973). Companionship activities issue

from the basic interpersonal relationship in marriage, are independent of activities with other people, and do not involve any expenditure of funds. Examples include: "did something the other appreciated", "drove or walked for pleasure", "had a good laugh", "was affectionate" and "spent evening chatting" (1973:718). Marriage "sociability", on the other hand, includes activities of a social nature which may or may not involve other people and the expenditure of funds. Items here include: "visited friends together", "went out to movie, etc.", "entertained friends", and "ate out in restaurant" (1973:718).

Another common activity division is that between joint, parallel, and individual activities:

Joint activities require a high degree of interaction for successful completion of the activity and tend to open communication and encourage role interchange.

Parallel activities are little more than individual activities in group settings and a minimum of interaction is allowed among the participants.

Individual activities require no communication with others and may actually discourage interaction. (Orthner 1975:95)

Figure 1 provides examples of parallel and joint leisure activities. The examples should not be considered rigid, however, inasmuch as there is evidence to suggest that some of the activities which are termed "parallel" may in fact be "joint" (Scheuch, 1960).

Carisse (1975) offers a four-part typology of preferred values for leisure activity. Couples who value

 Parallel Leisure Activities

Shopping for pleasure	Writing poems, stories	Fishing
Going to library	Fancy needlework	Swimming
Attending race tracks	Art modeling, painting	Hunting
Visiting museum or gallery	Sewing for pleasure	Hiking
Attending movie theater	Writing letters	Playing pencil and paper games
Attending wrestling or boxing matches	Reading books, magazines, newspapers	Attending musical concerts
Attending athletic events as spectator	Playing musical instruments	Attending lectures, debates
Caring for pets	Listening to records or tapes	Attending plays or other drama
Studying nature	Watching television	Taking college class
Collecting (stamps, coins, etc.)	Listening to radio (primary activity)	Attending church
Gardening and yard work for pleasure	Skin or scuba diving	Taking naps or just relaxing
Tinkering in workshop	Roller skating	Creatively cooking (beyond meal prep.)
Constructing models	Ice skating	
	Bicycling for pleasure	

 Joint Leisure Activities

Going to park or playground	Motor boating	Playing ping-pong
Visiting zoo	Flying for pleasure	Taking part in: amateur dramatics, debates, discussion groups, community service work, parent-teacher activities, political activities
Attending drive-in theater	Playing handball	
Spending time in tavern, nightclub, lounge	Boxing, wrestling, judo	
Visiting amusement parks	Attending organized camps	
Attending parties	Going on hay ride	Attending: craft or adult ed. classes, fraternal organization meetings, community social events, church suppers, family or club reunions, other socials outside the home
Picnicking away from home	Playing badminton	
Eating meals out	Playing shuffleboard	
Visiting friends	Riding (horses)	
Riding in auto for pleasure	Playing miniature golf	
Playing billiards or pool	Playing golf	
Playing basketball, baseball, volleyball	Camping (organized area)	
Playing tennis	Camping (backwoods)	
Water skiing	Playing backyard or lawn games	
Snow skiing	Dancing or attending dances	Playing informally with the children
Bowling	Playing football	Engaging in affectional or sexual activity
Sailing	Canoeing, rowing	Casual conversation
	Playing card games	
	Playing board games	

 Source: Orthner (1976).

Figure 1. Listing of parallel and joint leisure activities.

"togetherness" have the same leisure interests and like to do things together as much as possible. Couples who value "similarity" have many interests in common but physical propinquity is not specifically sought. "Closeness" is valued by those for whom physical closeness is important but doing different things while together is considered normal. And "individuality" is valued by couples in which each partner has his/her own interests and pursues them according to his/her own time schedule.

Another companionship typology is presented by Blood and Wolfe (1960) which is based more on the content of an activity rather than on any underlying theoretical dimensions. Four types of companionship are described. The "organizational" type involves joint participation in formally organized groups outside the home. The "informational" type involves spousal communication about things which happen while a couple is apart. Couples who get together with the husband's work colleagues illustrate "collegial" companionship. The fourth type, "friendship," simply involves visiting with friends.

Relationship to Marital Satisfaction and Happiness.

Companionship alone does not guarantee marital success, but it does explain a relatively large portion of the variation in marital satisfaction (.50 for husbands and .60 for wives; Hawken, 1968; Blood and Wolfe, 1960; Jordan, 1976; Locke, 1951; Feldman, 1964). Although there is a common

belief in our culture that a high rate of interaction in a leisure context produces more cohesion among individuals in a group (Carisse, 1975; Homans, 1950), it has been suggested that companionship is more likely the product of cohesion rather than its determinant (Orthner, 1976). The purpose here is only to note their relationship.

Using Orden and Bradburn's distinction (1973), "companionship" is more strongly related to marital happiness than "sociability", suggesting that the personal relationship between a husband and wife is more important in marriage than the social activities they enjoy together. Greater satisfaction in marriage is also more highly correlated with joint activities than with parallel activities, and there is a negative relationship with individual activities (Orthner, 1974). More important for satisfaction is the quality of activity (Williams, 1978), the variety of activities (Blood and Wolfe, 1960), and the meaning an activity has for the individual (Donald and Havighurst, 1959), rather than the number of activities shared (Gerson, 1960; Benson, 1952; Hawkins and Walters, 1952; Orthner, 1975).

Relationship to Sociodemographic Variables. The quantity and quality of shared participation in various activities is a result of the expectations a husband and wife bring to a marriage. These expectations are conditioned by various sociodemographic factors. Older and

less educated persons, for example, engage in more individual or separate activities than the younger and more educated (Komarovsky, 1962). There is more sex-segregated activity in blue-collar marriages while white-collar husbands are more likely to include wives in their leisure pursuits. Wives of husbands next-to-the-top in terms of occupational status and income are relatively dissatisfied with companionship (even though there may be a fair amount of joint activity) since the achievement orientation of their upwardly mobile husbands detracts from companionship quality (Blood and Wolfe, 1960). It appears as though education is a better predictor of companionship satisfaction than occupation, and occupation a better predictor than income (Scanzoni, 1970). A certain level of discretionary income is needed, however, for couples to participate together in many forms of social and recreational activities. This may be a reason why marital happiness and companionship do not necessarily decrease when the wife chooses to work outside the home (Orden and Bradburn, 1974). On weekdays leisure activity patterns remain basically the same for all socioeconomic groups (with the exception of the upper classes). It is on weekends where social class differences in activities, especially with respect to variety, are most pronounced (Scheuch, 1960).

Leisure activities seem to be more significantly related to two stages in the marital career: when the

marital dyad is initiated (from 0-5 years of marriage) and when it is reaffirmed as children are being launched (from 18 to 23 years of marriage, Orthner, 1975). Participation in "joint" activities tends to decline and participation in individual activities tends to increase the longer a couple is married (Dentler and Pineo, 1960; Rollins and Feldman, 1970; Burgess et al., 1963; Komarovsky, 1962). The choice of leisure activities is more limited in families with children at home (Blood and Wolfe, 1960; Scheuch, 1960).

Husband-Wife Differences in Companionship. Wives appear to benefit more from companionship and sociability than husbands (Orden and Bradburn, 1973). Individual activities increase over the marital career for both husbands and wives, but more so for wives who are therefore more likely than their husbands to indicate dissatisfaction with the marriage (Orthner, 1975; Hawken, 1968; Orthner, 1974). The satisfaction level of husbands may be affected more by their attitudes toward leisure rather than by the quality and quantity of their actual leisure time activities (Gerson, 1960).

The Cognitive (Agreement) Dimension

The cognitive dimension of marital interaction is most often discussed in the literature with the use of such concepts as agreement or consensus. As with the other marital concepts, agreement or consensus may be defined more or less broadly. Handel (1967) broadly speaks of a

"congruence of images" in family life. He refers to the tendency toward compatibility or consensus of the emotionally significant images which family members have of each other as individuals and as a group. A woman, for example, may have an image of her family as a group of dependents who need her and reward her or she may see them primarily as the group that enslaves her. Each of these images has different consequences for interaction within the family. An example of a more narrow definition of consensus is given by Feldman: "the extent of agreement by husband and wife about areas of concern as indexed by their overt statements about differences in value orientations" (1964:53). Both the research reviewed here and the design of the present study are more representative of the latter definition.

Relationship to Marital Satisfaction and Happiness.

At the level of general theory about human groups, normative agreement and conformity is seen to produce approval and sentiments of liking among group members (Homans, 1950). Theorists of marriage and family life very early included consensus or "the degree of agreement or disagreement of a couple on the primary values or objectives of their marriage" as a criterion for marital success (Burgess et al., 1963:290).

Empirical demonstrations of the relationship of agreement to marital satisfaction have been offered by a

number of researchers. Perceived consensus about the goals of marriage is significantly and positively related to marital satisfaction (Feldman, 1964). Levinger and Breedlove (1966) suggest that perceived consensus or assumed agreement between partners when it overestimates actual agreement is the result of positive feelings they already feel for one another. It is when agreement has instrumental value for furthering the goals of the marriage that it contributes most directly to marital satisfaction (Levinger and Breedlove, 1966). In another study value similarity and the ability to recognize behavior associated with one's spouse's values was directly related to satisfaction in marriage. The ability to simply recognize the values of one's spouse, however, was not (Nast, 1979). Reminiscent of Handel's (1967) "congruence of images," satisfaction has also been shown to be related to the congruency of the husband's self-image with the image of him held by his wife. It was not, however, related to the congruency of the wife's self-image with the image of her held by her husband (Luckey, 1959).

Relationship to Length of Marriage. Burgess et al. (1963) reported that consensus decreased between the early and middle years of marriage. In the later marital stages, however, at least from the perspective of wives, perceived consensus again prevails (Blood and Wolfe, 1960). In general, value consensus follows the same pattern as the other

marital interaction variables which have been reviewed, i.e., it declines the longer a couple is married, with some evidence of a partial comeback in the later years of marriage (Udry and Nelson, 1961; Levinger and Breedlove, 1966).

HEALTH AND WELL-BEING

"Health" has been broadly described as the absence of any disease or impairment, whether physical or mental, real or imaged (McEwan, 1974:489). Given a social system reference, health is "the state of optimum capacity of an individual for the effective performance of the roles and tasks for which he has been socialized" (Parsons, 1972: 110). Illness in contrast involves "taking the role of the sick person" (Parsons, 1972:109). "Any activity undertaken by a person who feels ill, for the purpose of defining the state of his health and of discovering suitable remedy" is referred to as "illness behavior" (Kasl and Cobb, 1966: 246).

"Well-being" is often included within the definitions of health. By itself, it is generally regarded as positive psychological or mental health (see, for example, Raymond, 1980). It is very closely related to Antonovsky's "sense of coherence" which refers to:

...a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that one's internal and external environments are predictable and that

there is a high probability that things will work out as well as can reasonably be expected (1979:127)

Given the relationship of socioemotional factors in the etiology of disease, the distinction made between health and well-being is admittedly based more upon a need to distinguish between the extremes of a continuum than to describe two distinctly different realities. In this paper, unless the context indicates otherwise, health will usually refer more narrowly to physical well-ness, thereby reserving psychological well-ness as the referent for "well-being".

These health and illness definitions circumscribe the dependent variable of the present study. Mauksch's view of health and illness in relationship to the family which he describes as both the "process and the product of continuously interacting forces within the unit, among its members..." is particularly relevant to this study (1974:526). Indeed, illness behavior may serve a wide variety of interactional purposes (Mechanic, 1966). To name a few--it may be one way of seeking reassurance and support; it may be a way of providing an acceptable reason for social failure; it may help to avoid embarrassment and social difficulties (Mechanic, 1966).

Relationship to Socioeconomic Status

Although it is a generalization with a number of qualifications, it can be said that lower status persons

are "sicker" both physically and mentally than higher status persons, and ironically, use fewer health services despite this difference (Richardson, 1972; Gurin et al., 1960; Lerner, 1969).

As one moves from the lowest to the highest income categories, there is a steady decline in the proportion of persons experiencing chronic illness with activity limitations. Chronic illness which does not restrict activity, on the other hand, may be more characteristic of higher income persons (Richardson, 1972). It may be that some low-income persons with an activity limiting chronic condition have become low-income because of their illness (Lawrence, 1948). Income differentials, however, do not show such a pronounced relationship to acute disease (Richardson, 1972).

Heart-related diseases are ambiguously related to socioeconomic status. Some studies report higher rates of coronary disease in lower rather than higher socioeconomic levels (Lehman, 1967). Other studies while acknowledging greater prevalence of hypertension in the lowest in comparison to the highest social class, report that higher class levels experience more coronary disease (Graham, 1963). In a study conducted by Lilienfeld (1956), the lowest socioeconomic group experienced higher mortality rates due to myocardial degeneration and hypertensive

disease in comparison to higher social classes but there was no difference for coronary artery disease.

Similar to physical health, there is a social class gradient in relationship to mental health. In this case, however, the relationship is more pronounced. A number of studies have concluded that there is greater total prevalence of mental illness in the lower classes, with more psychoses relative to neuroses, and more schizophrenia relative to manic depressive psychoses (Leighton, 1957; Hollingshead and Redlich, 1953; Fried, 1969). In the Midtown Manhattan Study the lowest class level in comparison to the highest class level had more organic, psychotic, and psychosomatic personality types and a greater number of alcoholic, asocial, depressed, hostile, schizoid, and schizophrenic symptoms. The highest class had more psychoneurotic types who were characterized by aggressiveness (Langner and Michael, 1963; Rennie et al., 1957).

While these findings with respect to the relationship of mental illness to social class are consistent, there are methodological grounds for criticism. Many of these studies (the Midtown Study excluded) are based upon treatment rather than true prevalence data. One of the biases in the use of treatment data is that upper-class clients tend to be selected for psychotherapeutic treatment more often than lower-class clients who may be left untreated until they become chronic psychotics consigned to custodial

care (Meyers and Schaffer, 1954). Another problem relates to the suggestion that lower-class persons are more likely to express psychological distress in physiological terms, thereby confounding psychiatric rates with physical illness (Crandell and Dohrenwend, 1967).

In spite of the higher rates of illness, persons from lower socioeconomic groups underutilize health services. Physician visits are most frequent in higher status groups and least frequent among nonwhites for every age and income category (Richardson, 1972; Rosenstock, 1966). When physician visits do occur for low-income groups, they are more than twice as likely than other groups to see a physician in a hospital clinic or emergency room. Upper income persons, in contrast, not only use physicians more but also are more likely to use medical specialists for every specialty (Richardson, 1972). One explanation that has been offered for this difference in utilization is that upper class persons are more likely than lower class persons to view themselves as ill when they have particular symptoms and, when questioned about these symptoms, are more likely to report that they would seek a doctor's advice (Koos, 1954). Lower class persons also perceive less support from their significant others for assuming the sick role in comparison to those in other income groups (Petroni, 1969).

A study which is especially relevant to the topic of this thesis showed greater prevalence of psychiatric disturbance among English working class women compared to women in higher social classes (Brown et al., 1975). This class difference was due not to the greater frequency of difficulties and troubles among working class women but to the much greater likelihood that working class women would break down after the onset of problems. The primary intervening variable in determining whether a breakdown would occur was the degree to which a woman had an intimate and confiding relationship with a husband or male friend. Interestingly, confidants other than a husband or male friend appeared to play no protective role at all. The amount of emotional support and the level of satisfaction derived from the marital relationship, which is generally lower in lower class marriages, are critical to psychological health.

An excellent review of how lower class people view their bodies, medical treatment, and medical institutions has been presented by Lee Rainwater (1968).

Relationship to Age, Sex, and Religion

Chronic illness increases dramatically with age (Trussell and Elinson, 1959; Richardson, 1972; Downes, 1947). In terms of an overall rate for psychiatric disorders or a tendency to report symptoms of psychological anxiety, there is little relationship to age (Dohrenwend

and Dohrenwend, 1965; Gurin et al., 1960). The Midtown Study, however, showed more mental health impairment with advancing age (Srole et al., 1978).

Women tend to report more health problems than men (measured by the Cornell Medical Health Index, Aved, 1976) and wives utilize health services significantly more often than their husbands (Chien and Schneiderman, 1975). This is true even though wives may be more instrumental in influencing the illness behavior of their husbands than vice-versa (Petroni, 1969). Males, however, may experience higher morbidity rates when specific diseases are examined, e.g., arteriosclerotic heart disease and myocardial degeneration (Lilienfeld, 1956). While it is often claimed that women suffer more often from neurotic depression than men (Wright, 1972), some important studies do not support this conclusion (Srole et al., 1978).

Evidence from the Midtown Study showed no difference in mental health between Protestants and Catholics. Jews, however, significantly differed from these groups, having more members in the middle range of the mental health continuum rather than at either extreme (Srole et al., 1978).

A THEORETICAL MODEL

The theoretical model which provides the context for the present study is presented in Figure 2. It derives from the work of Aaron Antonovsky (1979).

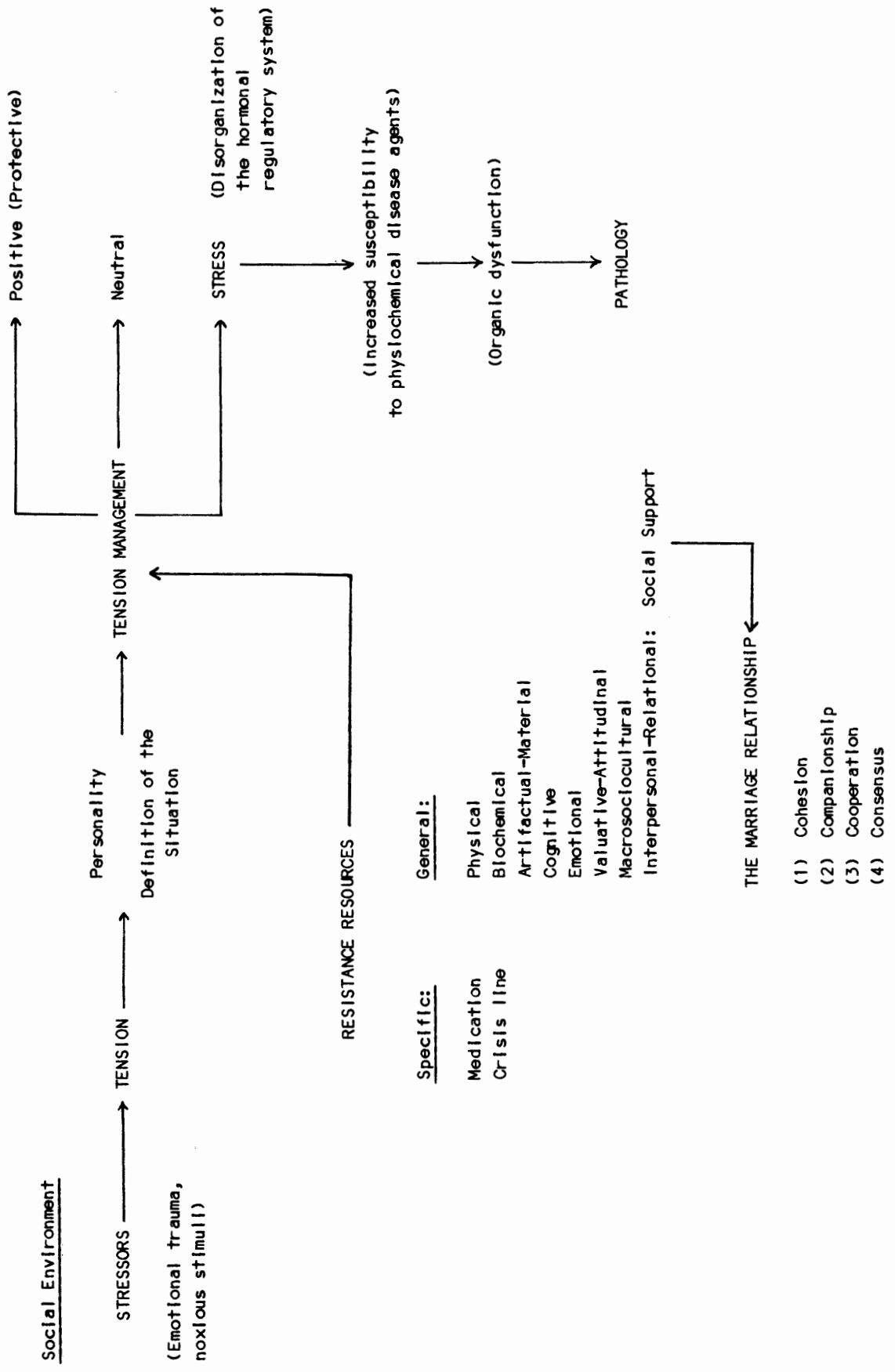


Figure 2. Theoretical model of the social environment-health relationship.

The social environment is composed of the total array of social situations, structures, and relationships which impinge on a person. Any one of these situations, structures, or relationships has the potential to become a stressor when it has negatively charged emotional significance or meaning for an individual. Marital conflict eventuating in divorce, for example, is an intensely traumatic experience. Such a situation involving the loss of a significant relationship creates a tension in the human organism which must somehow be managed. Whether the state of the tension has a positive, negative, or neutral effect on a person is determined by the tension management process. If the effect is negative, it is referred to as stress and is evidenced by a clinically observable disorganization of the body's hormonal regulatory system. The nature, duration and intensity of the hormonal imbalance determines whether one's susceptibility to physiochemical or microbiologic disease agents (which are directly implicated in the causation of disease) is increased. Increased susceptibility may result in organic dysfunction which manifests itself pathologically in the form of some specific disease entity.

Whether the tension management process is successful in avoiding stress is determined by the resistance resources of an individual. These resources, according to Antonovsky (1979), are of two types: specific and general.

Specific resistance resources intervene very directly in managing tension. Examples of these resources are taking medication or using a crisis phone hotline. General resistance resources help to facilitate the use of specific resources and fall within the following categories:

- a) physical
- b) biochemical
- c) artifactual-material: access to money, physical strength, food, clothing, shelter, etc.
- d) cognitive: knowledge, intelligence, information, etc.
- e) emotional: ego identity, etc.
- f) valuative-attitudinal: coping styles, rationality, flexibility, farsightedness, etc.
- g) interpersonal-relational: power, status, etc.
- h) macrosociocultural: greater pain tolerance due to differential socialization, etc.

Of special interest here are the interpersonal-relational resources. A significant part of these resources is an individual's system of social supports. Kaplan et al. (1977), in a fine review article, presents evidence from both animal and human studies of the protective effect of social supports in the face of psychosocial stressor factors (see also Pilisuk and Froland, 1978).

The marriage relationship, of course, is a particularly significant social support resource because it is through this relationship that many support mechanisms

operate. The support mechanisms of "normative fit" (consensus), "group solidarity" (cohesion), and "intimacy opportunities" (companionship, cooperation) are particularly relevant since they are used as the independent variables in the present study (Kaplan, 1977:58).²

Although the model depicts the psychosocial process through which physiological malfunctioning occurs, it is not difficult to see the appropriateness of the model for mental illness as well. A neuroendocrine imbalance, for example, may alter mental process in addition to organic structure and thereby create a psychological sense of ill-being.

Sociologists who are sympathetic with symbolic interactionism, the definitionists, believe that stressors affect people differently depending upon individual personality differences and individual definitions of the situation. According to this view, persons interpret and react to their life situations in terms of the meaning these have for them. It would therefore be incorrect to classify a set of social situations or relationships as inherently stressful. Other sociologists, the factists, without denying the validity of the interactionist framework, would note the possibility and desirability of identifying a class of stressors at a more general level which

²The marriage relationship itself may, of course, be a stressor in addition to being a source of social support.

consistently evoke major neuroendocrinal changes in people. If attributes of this class of stressors could be identified, it may well be seen that the same relationships or social circumstances within a given culture (or perhaps subculture) regularly function as stressors. At the same time, given the model, it should be recognized that no stressor or set of stressors is etiologically specific for any given disease. In this sense, there is no subset of clinical entities known as stress diseases since all diseases can, at least in part, be due to the psychosocial processes which have been described (Cassel, 1976).

THE MARITAL RELATIONSHIP AND HEALTH

Given the practical importance of the subject, the relative abundance of marital satisfaction studies, and the well-defined link between the social environment and health, it is remarkable that so few studies directly bear on the relationship between marital interaction and health. Pratt, for example, could find no direct studies of the relationship of marital companionship and spousal health before her own work in this area was published in 1972. A review article by Spanier and Lewis (1980) which summarized marital quality research of the 1970's indicated that, although little research had been conducted linking marital interaction and health, there was a developing interest in using marital quality as an independent variable in

predicting personal outcomes in the area of health and well-being.

The few sociological or social-psychological studies which do appear in the literature rely almost exclusively on self-evaluated health and well-being (with an emphasis on well-being) rather than on medical record data. Another prevalent characteristic of these studies is the use of general measures of marital happiness, adjustment, or satisfaction. Only infrequently do specific components of marital interaction (e.g., companionship) receive attention in relationship to health. In most of these studies there is also no attempt to establish the causal direction of the marriage-health relationship, i.e., "does poor health make a marriage unhappy or does an unhappy marriage damage health?"

Marital Interaction and Health

Marital satisfaction is positively related to indices of general morale or "happiness", psychological well-being, attitudes towards one's own health, and negatively associated with feelings of isolation and depression (Renne, 1970). Marital happiness is positively related to good health and good health practices (Geismar, 1973). Socially healthy persons who are happily married are also physically healthier and more likely to assess their health in positive terms than those experiencing lower levels of social health (Renne, 1974). These relationships also exist among

Chicano couples (Raymond et al., 1980), older couples (Mancini, 1979; Stinnett et al., 1972), childless couples (Glick, 1976), happily married couples (in comparison to unhappily married, Renne, 1971), and among couples enjoying stable marriages (in comparison to those seeking marital counseling, Rogers et al., 1970).

In one of the few marriage studies using stepwise regression analysis with physical health status as the dependent variable, marital satisfaction was the first variable to be entered in the regression equation for husbands and the third variable to be entered in the equation for wives. Joint activities at home was the third variable entered for husbands and the sixth variable entered for wives. Total variance explained was 40 percent for husbands and 60 percent for wives. Other variables in both equations included: depression, yearly medical visits, years lived in a large city, age, education, activities in the community without spouse, years married, activities at home without spouse, and activities in the community with spouse (Aved, 1976).

It is important to look beyond general measures of marital satisfaction to the specific elements of interaction in marriage, since these elements may continue to influence health even when the level of satisfaction is controlled. For example, among couples satisfied with their marriage, there is a significant association between

rheumatoid arthritis in the wife and peptic ulcer in the husband. The key variable here is marital hostility which contributes to the wife's arthritis via resentment and depression and to the husband's ulcer via unmet needs for emotional support (Cobb, 1969).

Another reason for examining specific interactional characteristics of marriage is that there is continuing disagreement as to the extent to which some of these characteristics are really correlates of marital satisfaction. Cuber and Haroff (1964) in their study of affluent couples found that the companionship of shared activities was not always necessary for marriage partners to feel that their marriage was good. The point here is that specific features of marital interaction will contribute additional information to our understanding of the marriage-health relationship.

The companionship of shared activities has been examined in relationship to health and well-being. Pratt (1972) measured companionship by means of an index composed of eleven types of activities husbands and wives often do together. She found the index to be significantly related to a variety of health indices for both husbands and wives. In a later study, using regression analysis, (Pratt, 1976) the index helped to explain the extent of health problems for husbands but not for wives. A number of items in a similar index showed a positive relationship with positive

affect and a slight negative relationship with negative affect in a study by Orden and Bradburn (1973).

An important class of variables intervening between marital satisfaction and mental and physical well-being may be referred to as the "husband-wife helping relationship" variables. Burke and Weir (1977) included the following variables in this class: informing one's spouse when tense and why, being satisfied with one's spouse as confidante, taking specific actions to help one's spouse, feeling helpful to one's spouse, defining behaviors spouse could carry out or change to be more helpful, being satisfied with the help received from one's spouse, and being the first person turned to for help. Nearly all of these variables were positively related to the mental and physical health indices used in the work of these researchers (Burke and Weir, 1977).

Comparison of Husbands and Wives

A common denominator in research assessing the effects of psychosocial processes on health is that the member of the family system (or marital dyad) who is most involved in the emotional structure of the family (or relationship) is most likely to be affected (Meissner, 1966). Especially since Parsons and Bales popularized the notion that the woman is the socioemotional specialist in the family (Parsons and Bales, 1955), it has been easy to assume that this member is the wife/mother. In agreement

with this assumption are studies which suggest that marriage is more psychologically stressful for wives (Bernard, 1972; Gove, 1972; Kreitman, 1964). As an example of this type of finding, correlations of self-esteem with the Locke-Wallace Marital Adjustment Test are significantly higher for wives than husbands (Barnett and Nietzel, 1979). The same study shows a significant positive correlation between self-esteem and frequency of activities engaged in with spouse for wives, but not for husbands.

In another study by Weiss and Aved (1978), a greater proportion of variance in physical health status is explained for wives (60%) than for husbands (40%) by a set of predictors which include marital satisfaction. However, this study also suggests that marital dissatisfaction and depression are more likely to be found together for husbands than for wives, although the magnitude of the correlation is small. Other findings support this greater apparent influence of marriage on husbands (Glenn, 1975; Radloff, 1975). Perhaps it is only the earlier stages of marriage which husbands find most stressful (Campbell et al., 1975). In general, one senses from the literature that the health and well-being of wives tends to be somewhat more affected by marriage but more research is needed to determine the circumstances under which this generalization appears to hold.

RESEARCH HYPOTHESES

The following hypotheses derive from the review of the literature:

- Higher levels of marital cohesion, companionship, cooperation, and consensus will be related to higher levels of health and well-being;
- The health and well-being of wives will more likely be affected by marital cohesion, companionship, cooperation, and consensus than that of husbands;
- Diseases with a higher emotional component will more likely reflect variation in marital cohesion, companionship, cooperation, and consensus than other types of illness;
- Marital cohesion, companionship, cooperation, and consensus will influence health and well-being independent of the effect of health and well-being on these marital variables.

CHAPTER III

METHODOLOGY

The population and data for this thesis derive from the Oregon Region of the Kaiser-Permanente Medical Care Program (KPMCP), a federally certified health maintenance organization. Established in 1943, this prepaid medical plan now enrolls approximately 250,000 members, or about 20 percent of the population of the Portland, Oregon metropolitan area. This clientele is a broadly based population group with demographic and sociographic characteristics that correspond very closely to the metropolitan population as a whole (Kaiser-Permanente Health Services Research Center, 1980). The health status of this population and tendency to seek medical care is also not unlike that of the population enrolled in provider-sponsored plans (Blue Cross and Oregon Physicians Service) or commercial plans (Freeborn and Pope, 1981).

Medical personnel, practicing full-time in an integrated hospital-ambulatory care system, provide comprehensive medical services within the context of group practice. Health plan members are encouraged to choose a personal physician and to return to that same physician when the need for medical care arises. The focal point for medical

care is the physician's office, where most patients are seen by appointment, although provisions are made for seeing walk-in patients as well. Emergency services are available at all hours, and house calls are provided for patients when medically indicated.

The medical care system maintains a single, central medical record for each member. Every contact an individual makes with the system is recorded in his/her unit chart. These medical records provide highly reliable indicators of utilization, because it has been shown that the membership receives essentially all its medical care within the system (Pope et al., 1972). In 1966 a five percent random sample of health plan subscribers was selected by the Kaiser-Permanente Health Services Research Center for utilization and other health-related research purposes. The sample continues to be updated monthly.

STUDY POPULATION

A subset of the Health Services Research Center five percent research sample provided the population for the present investigation. This subset includes those subscriber units (families) that were continuously enrolled in the KPMCP from January 1, 1969, through December 31, 1970. This population has 2,502 adult members, including 1,004 married couples. After eliminating sixteen couples who were still legally married but no longer living together,

988 couples remained to provide the study population for this project.

DATA SOURCES

There are two sources of data for this study: a personal interview survey and patient medical records.

Household Interview Survey

Interviewed in the survey were 2,502 adult members, of 1,529 subscriber units (families) included in the sample, representing 92 percent of the total sample.

The survey elicited three different types of data:

- (1) objective or factual information, such as the demographic characteristics of the individuals and families in the study;
- (2) information about behaviors of individual family members as well as the family as a whole, including actions directed toward health and medical care and interaction within the family, on the job, etc.; and
- (3) perceptual or attitudinal data, including a wide variety of beliefs, opinions, and perceptions about things related to medicine, medical care, the self, one's personal situation, and life in general.

Separate but simultaneous interviews with the husband and wife were conducted when both were health plan members.

This made it possible to develop a special "couple" data file which linked information for husband and wife as a unit. The present study represents the first use of this unique data file.

Outpatient Information System

All medical care contacts, including doctor office visits, emergency room use, telephone calls, and correspondence, are recorded for each health plan member on a "Medical Service Record Form" (see Appendix, pp. 138, 139). Presenting morbidities are coded on this form in accord with the most current edition of the International Classification of Diseases, Adapted (ICDA). This information, along with the other data collected by the form, is transferred to a continuously updated computer file.

After a patient's medical record form is completed, the morbidity information is converted to a code in the Kaiser Clinical-Behavioral Classification System (see Appendix, p. 140, Hurtado and Greenlick, 1971). This system was developed to group diseases according to the special needs of investigators and can be adapted to solving both clinical and behavioral research questions. Ten disease classes are identified within the system based upon the likelihood that each condition within a class will produce similar medical care utilization responses among persons of similar background characteristics.

The survey described above was conducted approximately in the middle of the period during which medical record data was collected for most of the respondents in this study, i.e., some utilization information pre-dates and some post-dates the household interview survey. The assumption is made that the cross-sectional survey data would not be significantly different had it been collected in a two to four year period either preceding or following the actual survey.

MEASURES

The marital relationship measures will be described at some length because they have been developed to achieve the primary aims of this research project. The measures of cohesion, companionship, and cooperation are constructed for husband's and wife's separately before being combined to create a joint measure representing the "couple." Consensus, however, is designed only to represent the couple. Each of these measures, both individual and joint, are at the ordinal level of measurement.

The remaining measures, both of health and well-being and the sociodemographic characteristics, have been widely used in previous studies and will therefore be more succinctly discussed.

The Marital Relationship

Four marital interaction variables are developed. These are: cohesion, a measure of affect; companionship and cooperation, measures of activity; and consensus, a measure of agreement. All of these variables are measured by combining spouses' responses to various questions from the Household Interview Survey.

Cohesion (Affect). Cohesion refers to a sense of attachment, togetherness, we-ness, or bonding between marriage partners which is revealed in the feelings which one spouse has about the other or about the marriage relationship itself. It is closely related to Scanzoni's affective dimension of primary interaction (1970). It is measured by an index combining four items from the survey questionnaire. Two of these are taken from a list of activities which married couples often do together. Specifically, respondents were asked to indicate whether they had "spent an hour or two just chatting with each other" and whether they had "had a good laugh together or shared a joke" within the past few weeks (yes/no).³ The other two items are trichotomies. One inquires about the extent to which a husband or wife is worried about "getting along with

³Studies have demonstrated the importance of asking respondents to consider a limited (current) time span rather than to "average" their feelings over the duration of their marriage. How a respondent evaluates previous marital interaction is strongly influenced by the current state of interaction (Hawkins, 1968).

his/her spouse" (no, not worried; yes, extremely worried; yes, somewhat worried). The other asks respondents to rate the happiness of his/her marriage (extremely happy, pretty happy, not especially happy).⁴

Table I presents the distribution of responses for husbands and wives as separate groups (i.e., specific husbands and wives are not linked) to the four questionnaire items which compose the cohesion index. It reveals that similar proportions of husbands and wives responded to each of the categories of the four items. Only the item on "worry" about the spousal relationship shows a difference greater than a few percentage points. Wives tend to worry about their relationship with their husbands somewhat more than husbands worry about their relationship with their wives. Most of the husbands and wives, however, chat, laugh, describe their marriage as extremely or pretty happy, and are not worried about their relationship with their spouse. These findings are consistent with previous studies (Orden and Bradburn, 1973; Langner and Michael, 1963). Table II, for example, shows marriage happiness ratings reported in selected studies.

The first step in constructing the cohesion index was to create a "communication" measure by combining the "chat" and "laugh" items. Those husbands or wives (a separate

⁴This question is identical to that used by the National Opinion Research Center in its General Social Survey (Glenn, 1975).

TABLE I
 FREQUENCY DISTRIBUTIONS FOR SURVEY ITEMS USED
 IN MARITAL COHESION INDEX

	<u>Husbands</u>	<u>Wives</u>
"Spent an hour or two just chatting"		
(a) Yes	92.1%	93.2%
(b) No	7.9	6.8
	(n = 965)	(n = 980)
"Had a good laugh together or shared a joke"		
(a) Yes	97.0	96.7
(b) No	3.0	3.3
	(n = 963)	(n = 980)
"Worried about getting along with spouse"		
(a) No, not worried	91.3	85.7
(b) Yes, somewhat worried	7.5	11.5
(c) Yes, extremely worried	1.2	2.8
	(n = 961)	(n = 979)
"How happy is marriage"		
(a) Extremely happy	51.4	52.5
(b) Pretty happy	47.5	45.3
(c) Not especially happy	1.1	2.2
	(n = 960)	(n = 983)

Note: Numbers in parentheses differ because of missing data.

TABLE II
 MARRIAGE HAPPINESS RATINGS REPORTED IN SELECTED STUDIES
 (PERCENTAGE DISTRIBUTION)

<u>Study</u>	<u>Marriage Happiness Rating</u>			<u>Total</u>	
	<u>Very Happy</u>	<u>Pretty Happy</u>	<u>Not Too Happy</u>	<u>%</u>	<u>N</u>
Orden and Bradburn (1973)	60	26	3	99	1738
Bradburn and Caplovitz (1965)	76	23	1	100	363
Gurin, Veroff, and Feld (1960)	68	29	3	100	1875
Landis (1953)	83	16	1	100	409
Burgess and Cottrell (1939)	63	14	22	99	526
Terman (1938)	85	9	5	99	792

Source: Orden and Bradburn (1973).

Note: In the present study, pre-test data using response categories similar to these produced similar results. In the final survey, however, "extremely happy" is used in place of "very happy" to produce a more equitable distribution of responses across categories. This explains why the happiness ratings in Table I differ from the ratings depicted here.

"communication" measure was created for each spouse) who both chat and laugh or do neither form the two extreme categories. Those who do one or the other, but not both, form the middle category. The categories of the "communication" measure and the remaining two measures to be included in the cohesion index ("worry about relationship with spouse" and "extent of marital happiness") are then examined for consistency of direction in order to insure an ordinal level of measurement.

Combining these three measures results in an ordinal-level cohesion index for each spouse. A similar combinatory process, this time adding the husband and wife cohesion indices, creates a multi-category cohesion index representing the "couple." The final step is to collapse the categories approximately into thirds (high, medium and low).

Table III shows the correlations among the husband and wife measures which are used to construct the couple cohesion index. With the exception of the correlations involving marital communication and spousal worry, all items are significantly related. These items are appropriate for inclusion in an index of cohesion since they are interrelated strongly enough to suggest that they are measuring different aspects of a broader construct but not so strongly as to be redundant. Examining the correlation matrix in this way provides a method of assessing the

discriminant and convergent validity of the cohesion index. Discriminant validation refers to the fact that when measurements correlate highly with each other, they may be

TABLE III

CORRELATIONS AMONG HUSBAND AND WIFE MEASURES USED IN THE CONSTRUCTION OF COHESION INDEX (ZERO-ORDER PEARSON)

<u>Husband's Measures</u>	<u>Wife's Measures</u>		
	Happiness	Worry	Communication
Happiness	.385***	.241***	.143***
Worry	.216***	.287***	.004
Communication	.080**	.024	.022

*Significant at $p = .05$.

**Significant at $p = .01$.

***Significant at $p = .001$.

measuring the same rather than different constructs. In contrast, convergent validation means that if measurements correlate lowly, they may be measuring a different rather than the same construct (Campbell and Fiske, 1959).

Companionship and Cooperation (Activity). Companionship is defined here as joint activity undertaken by a husband and wife for the benefit of the shared experience. Such activity produces a sense of pleasure in doing something together. In contrast, cooperation, although also a joint activity, has an instrumental purpose. It is activity which requires contributions from both partners to achieve a desired outcome for one or both of them.

Although companionship receives more attention in the literature, cooperation is as important as companionship for understanding the character of the couple's interaction. Support for this view is provided by Blood and Wolfe (1960) who claim that marital satisfaction is enhanced when a husband helps his wife to solve the problems she faces (an example of a cooperative activity). Similarly, Burke and Weir (1977) report that greater marital satisfaction is associated with the performance of a greater number of helping activities between husbands and wives. The same study also indicates that better mental and physical health is related to partners selecting each other as first choice of helper, viewing themselves as good helpers, and expressing greater satisfaction with the helping interaction between them. For these reasons both cooperative and companionable activities will be examined in this thesis. Both of these concepts reflect the nature of Scanzoni's affiliative dimension of primary interaction (1970).

The companionship and cooperation measures will be considered together because they are both the result of a factor analysis⁵ of a set of survey items which assess

⁵Kim (1980:457) describes factor analysis as a "multivariate exploratory and analytical procedure used primarily to reduce the information contained in a set of variables to a smaller set of composite variables called factors." It offers the opportunity to view parsimoniously a large number of variables or indices in terms of a limited number of conceptual dimensions. An excellent introductory review of this statistical technique is given by Rummel (1967).

(yes/no) recent participation in various activities married couples often do together. The utility of a marital activity list for the measurement of companionship is illustrated in a study by Pratt (1972). The significant positive relationship between companionship and health in this study indicates that such a companionship measure has some construct validity.⁶

Table IV presents the rotated loadings, using varimax rotation, for the various factors identified for husbands and wives respectively. Clusters of highly intercorrelated survey items which contain the highest loadings in each column (designated by the "boxed" areas) represent the factors.

Given the definition of cooperation, factor two, for both husbands and wives, is considered to represent this concept. Factor two for husbands contains "visited" and "entertained" friends, "helped spouse solve problem" and "worked on household project"; while factor two for wives contains the latter two items in addition to "done something spouse appreciated". This means that cooperation will be measured somewhat differently for husbands and wives.

Factors one and three provide the content for the companionship measure. This combination of factors

⁶See Smith (1975) for a discussion of construct validity.

TABLE IV

LOADINGS FOR COMPANIONSHIP, COOPERATION, AND COHESION FACTORS
(VARIMAX ROTATION)

	Factor 1 (Companionship)	Factor 2 (Cooperation)	Factor 3 (Companionship)	Factor 4 (Cohesion)
(For Husbands)				
Gone out	.727	.094	-.019	.041
Eaten out	.665	.042	.253	.060
Entertained friends	.135	.732	-.050	.099
Visited friends	.480	.601	-.147	.031
Helped spouse with problem	-.503	.511	.303	.161
Worked on project	.034	.457	.397	-.021
Gone shopping	-.051	.049	.706	-.070
Taken drive or walk	.266	-.072	.604	.081
Done something appreciated	.011	.163	.429	.419
Chatted	-.080	.005	-.031	.788
Laughed	.185	.093	.017	.687
(For Wives)				
Visited friends	.800	-.020	.104	.073
Entertained friends	.725	.116	-.075	.173
Gone out	.475	.211	.333	-.233
Helped spouse with problem	-.050	.772	.016	.090
Done something appreciated	.215	.627	-.004	.123
Worked on project	.057	.550	.255	.054
Gone shopping	-.118	.153	.714	.085
Taken drive or walk	.077	-.060	.637	.273
Eaten out	.332	.148	.554	-.051
Chatted	.002	.047	.132	.814
Laughed	.163	.284	.104	.707

Note: "Boxed" areas represent factors.

contains the following items for both husbands and wives: "gone shopping", "taken drive or walk", "gone out for entertainment", and "eaten out." Husbands add "done something spouse appreciated" and wives add "visited" and "entertained" friends to this list. This means that companionship will be measured differently for husbands and wives.⁷

The companionship and cooperation measures are constructed by summing the number of positive responses to the items contained within the factor(s) which is (are) associated with each concept. Simple summation is used because there is no theoretical basis for weighting any of the items. In each case the result is an ordinal-level measure of companionship and cooperation for each spouse. Combining husband and wife companionship measures creates an ordinal companionship measure representing the "couple." The final step involves collapsing the distribution to produce six categories. The same process is used in constructing an ordinal "couple" measure of cooperation with five categories.

Table V shows how individual activities are perceived by husbands and wives as separate groups (i.e., specific husbands and wives are not linked). In general, their perceptions are quite similar, differing at most by only three

⁷Factor four for both husbands and wives consists of items (chatted and laughed) used in the construction of the cohesion index described earlier.

TABLE V

MARITAL ACTIVITIES ENGAGED IN AS PERCEIVED BY HUSBANDS AND WIVES

	<u>Husbands</u> (% Yes)		<u>Wives</u> (% Yes)	
Visited friends	80.3	(n = 966)	79.5	(n = 980)
Gone out for entertainment	62.9	(n = 966)	60.1	(n = 980)
Chatted for an hour or two	92.1	(n = 965)	93.2	(n = 980)
Worked on household project	69.9	(n = 964)	68.9	(n = 980)
Entertained friends at home	76.4	(n = 965)	73.4	(n = 980)
Gone shopping	77.8	(n = 965)	74.1	(n = 980)
Had good laugh	97.0	(n = 963)	96.7	(n = 980)
Eaten out	78.3	(n = 965)	75.7	(n = 980)
Taken drive or walk	75.3	(n = 961)	75.2	(n = 980)
Done something spouse appreciated	82.0	(n = 955)	86.2	(n = 976)
Helped spouse solve problem	75.7	(n = 963)	70.8	(n = 979)

Note: Numbers in parentheses differ because of missing data.

to five percentage points and usually by only one or two. The most commonly engaged in activities, outside of "chatting" and "laughing" which were used in the construction of the cohesion index, are "visited friends" and "done something spouse appreciated." The least frequent activities are "gone out for entertainment" and "worked on a household project"; activities which may require more time or money than some of the others. Approximately two-thirds of each group, however, indicate that they had done these things within the past few weeks. These findings are consistent with previous studies (Orden and Bradburn, 1973).

Consensus (Agreement). Consensus represents agreement between husband and wife on the basic norms, beliefs, attitudes, and values which comprise their shared world view or outlook on life. It relates, in part, as explained earlier, to Scanzoni's cognitive dimension of primary interaction (1970).

The consensus measure is developed by comparing husbands' and wives' religious affiliations or preference. Of interest are not the affiliations or preferences themselves but rather whether or not spouses have identical, similar, or different affiliations or preferences. Most religious groups have a vested interest in the socialization of their adherents. Ordinarily, such socialization goes beyond inculcating the fine points of doctrine to providing a general framework which includes appropriate

values, norms, and attitudes for relating to the world. Comparing the religious affiliation of marriage partners would therefore seem to be a fitting measure of consensus.

Specifically, two survey questions are used in the construction of the consensus measure. One asks the respondent for his/her religion (Protestant, Catholic, Jewish, Eastern Orthodox, Asian religion, or no affiliation). The other asks the respondent to designate a specific denomination if he/she is Protestant. These questions are the basis for constructing the final ordinal consensus measure which represents the couple. The categories of this measure include, in order of lesser to greater consensus: (a) husband and wife of different religions (in terms of outlook on life, "no religion" is interpreted in these categories as if it were a religion); (b) husband and wife both Protestant but of quite different denominations (in terms of outlook on life, "no specific denomination" is interpreted in these categories as if it were a religion); (c) husband and wife both Protestant and of closely related (i.e., theologically similar) denominations; and (4) husband and wife of the same religion and, if Protestant, the identical denomination.

Table VI compares the religious affiliation of husbands as a group with wives as a group. More wives than husbands are Protestant. More husbands than wives have no religious affiliation. When specific couples are compared,

TABLE VI
RELIGIOUS AFFILIATION OF HUSBANDS AND WIVES

	<u>Husbands</u>		<u>Wives</u>	
PROTESTANT	661	(66.3%)	755	(75.2%)
Congregational, Unitarian	23		31	
Disciples of Christ, Mennonite, Reformed, Quakers	10		13	
Christian, Methodist (UCC), Presbyterian, Evangelical United Brethren	212		233	
Baptist, Church of Christ, Free Methodist, Wesleyan Methodist, Covenant, Salvation Army	93		111	
Church of God, Nazarene, Other Holiness	25		30	
Assembly of God, Apostolic Faith, Other Pentecostal	12		21	
Christian Scientist, Mormon, Seventh Day Adventists, Jehovah's Witnesses	33		50	
Episcopalian, Lutheran	142		168	
No specific denomination	105		94	
No answer	6		4	
CATHOLIC	146	(14.6)	155	(15.4)
JEWISH	8	(0.8)	7	(0.7)
EASTERN ORTHODOX	3	(0.3)	2	(0.2)
ASIAN	4	(0.4)	2	(0.2)
NONE	<u>175</u>	<u>(17.6)</u>	<u>83</u>	<u>(8.3)</u>
	997	100.0	1004	100.0

77 percent are identically affiliated by religion and, of those who are Protestant, 58 percent are identically affiliated by denomination.

Health and Well-Being

In this analysis, health is measured by the mean annual rate of medical care contacts based upon two to seven years of utilization data. Four different disease classes (chronic, acute, trauma, and emotion-related) are measured in this way. In addition, a measure of self-evaluated general health status is included. Well-being is assessed by means of the Langer 22-Item Mental Health Index, and a measure of self-esteem. Both well-being measures and the measure of general health status are derived from the Household Interview Survey. Medical care contact data are obtained from patients' medical records. The survey measures will be described first before discussing the utilization measures.⁸

Self-Esteem. A single question asking respondents to describe their feelings in terms of how much they would like to change themselves measures self-esteem. Three choices are given: change completely, change many things, or stay the same.

⁸The data source included other health and well-being measures: an Affect-Balance Scale, a Physical Symptoms Index, and a Worries Scale. Correlations of our health measures with these additional measures were sufficiently high so that using these additional measures seemed unnecessary.

General Health Status. This measure is based on responses to the survey question, "Would you say your health in general is excellent, good, fair, or poor?" It is intended to reflect an individual's own perception of his or her general or composite health status.

Mental Health Status. This measure is the 22-item scale developed in the Midtown Manhattan Study. Information regarding the instrument's validity is given by Langner (1962). Although it was developed as a general measure of mental health, it is primarily a measure of psychophysiological symptomology and general malaise (Seiler, 1973). Conventional scoring, i.e., assigning a value of one to each "pathological" answer for the 22 items and summing across items, is followed. While the possible range of scores is 0 to 22, the actual range is 0 to 15 (Freeborn, 1977).

The remaining health measures represent rate of total contacts for four of the disease classes from the ten-category Kaiser Clinical-Behavioral Classification System. As explained above, total contacts for this study includes all ambulatory contacts with health providers in the system as well as contacts with medical care personnel through telephone calls and letters.

Chronic Disease with Treatable Symptoms. Chronic disease includes impairments or disabilities which may require rehabilitative training and/or a long period of

supervision, observation, etc. Excluded here are permanent impairments or disabilities for which treatment is not helpful in eliminating manifestations of the illness.

Acute Disease. Acute disease includes disease produced by microorganisms such as viruses or bacteria or complications resulting from other illnesses or from surgical and medical procedures.

Trauma and Related Conditions. Trauma refers to illness or injury caused by external agents. Burns, chemical poisoning, fractured bones, and adverse reactions to medication are examples.

Emotion-Related Disease. Emotion-related diseases are more likely than other diseases to be produced or aggravated by emotions or by a disorganized social or psychological environment. Also included are emotional disorders without organic manifestations such as psychoses, neuroses, and psychophysiological disorders.

Sociodemographic (Control) Variables

Since the literature shows socioeconomic status, education, and age, to significantly influence both marriage and health, they are included in the analysis as control variables.⁹ Self-reported childhood health status and duration of marriage are also included as

⁹Since a large proportion of the study population (75.5%) had been married only once, it was considered unnecessary to control for number of marriages.

control variables. All of these variables are obtained by means of the Household Interview Survey.

Socioeconomic status is measured by the Duncan Socioeconomic Index. Education, age, and duration of marriage are simply measured in years. Childhood health status is based on the respondent's rating of his or her own health in childhood as excellent, good, fair, or poor.

FORM OF THE ANALYSIS

Each of the dependent, independent, and control variables is examined in relationship to each other. While this first involves cross-tabulational analysis in order to visualize the shape of the various relationships, only the results of a correlational analysis will be presented here.¹⁰

The core of the analysis revolves around the use of the stepwise multiple regression procedure to address the questions posed in this study. In each regression the marital interaction and control variables are regressed on each of the health and well-being variables to determine the relative importance of the marital interaction and

¹⁰Although a number of the variables are ordinal-level, they are treated as if they were interval-level. This violation of assumptions for correlational statistics has become something of a convention in sociological research and is not considered serious here since the intent is merely to discover the existence of relationships and not to determine specific or absolute values of the correlations.

control variables. This regression procedure is used here solely to determine the relative contributions of the independent variables in "explaining"¹¹ variance in the various dependent variables. The predictive utility of multiple regression based on the absolute value of the regression coefficients is not of concern here.

The theoretical model presented earlier in this thesis simply provides a context for answering the questions of interest in the present research. It is not the purpose of this analysis to test the model itself.

¹¹When the term "explain" is used in presenting the findings of the various regression analyses, it should be understood that it is being used only in a statistical sense and not in terms of any cause-and-effect model.

CHAPTER IV

FINDINGS

A summary of the sociodemographic and health characteristics of the husband and wife groups will be presented first in order to provide some familiarity with the study population. The relationship of the sociodemographic variables to the health and well-being variables is then described as a justification for the use of the sociodemographic variables as control variables in further analyses. Finally, data from a series of stepwise regression analyses is utilized to answer each of the research questions posed early in the thesis.

CHARACTERISTICS OF HUSBANDS AND WIVES

Sociodemographic Characteristics

At the time of the analysis the data available for education and socioeconomic status consisted of household information only, i.e., information about the male head. A broad range of educational and socioeconomic levels is represented among the households in the study population. Approximately one-third have completed less than high school, one-third have completed high school, and another third have at least some college education. Seventeen

percent of the households are coded in the lowest socio-economic category (Duncan Index), 18 percent in the highest category, and the remaining 65 percent are apportioned among the middle categories.

Age and number of years married are also broadly distributed among respondents. For both husbands and wives (as separate groups), nearly two-thirds are under age 50 and have been married for 25 years or less. The youngest quarter of the husband group and the youngest third of the wife group are under age 35. A third of both groups have been married for ten years or less.

Health and Well-Being

Wives are consistently more likely to score lower than their husbands on every health and well-being measure except one (See Table VII). Husbands experience more trauma, possibly because their occupational environment and/or male role behavior is more likely to increase their risk of accident or injury.

In terms of mental health status, more than twice as many husbands as wives are in the "symptom-free" category (38 percent compared to 18 percent). Wives also have lower self-esteem than husbands, being nearly twice as likely to want to "change many things" about themselves (42 percent compared to 25 percent).

The rate of contacts for medical care for wives is 16 percent higher than husbands for chronic disease, 38

TABLE VII
COMPARISON OF MEANS ON THE HEALTH AND WELL-BEING MEASURES
FOR HUSBANDS AND WIVES

	<u>Husbands</u>	<u>Wives</u>	<u>Significance of Difference</u>
<u>Survey Measures</u>			
Self-esteem	2.73 (n = 973)	2.57 (n = 989)	.000
General Health Status (current)	1.83 (n = 977)	1.84 (n = 996)	.767
Mental Health Status	1.49 (n = 904)	2.66 (n = 915)	.000
<u>Utilization Measures</u>			
Chronic Disease	1.37 (n =1001)	1.59 (n =1001)	.020
Trauma	.68 (n =1001)	.52 (n =1001)	.001
Acute Disease	.84 (n =1001)	1.17 (n =1001)	.000
Emotion-Related Disease	.75 (n =1001)	1.19 (n =1001)	.000

Note: For all health and well-being measures except "self-esteem", the smaller the mean, the greater the health and well-being. For "self-esteem", the smaller the mean, the lower the "self-esteem."

Utilization measures represent number of contacts per year for specific illnesses.

The significance of difference in means was determined with the t test.

percent higher than husbands for acute disease, and 59 percent higher than husbands for emotion-related disease.

On self-evaluated health, both in childhood and currently, husbands and wives compare more closely. With respect to current health status, 38 percent of the husbands and 34 percent of the wives rate their health as excellent, 45 percent of the husbands and 49 percent of the wives rate their health good, 15 percent of the husbands and 14 percent of the wives state that they are in fair health, and about 3 percent of both husbands and wives report their health to be poor.

Very similar findings obtain in relation to childhood health. Forty-seven percent of the husbands and 45 percent of the wives evaluate their childhood health as excellent, 42 percent of the husbands compared to 39 percent of the wives rate their childhood health as good, 8 percent of the husbands and 11 percent of the wives rate their health in childhood fair, and about 4 percent of both husbands and wives report their health as a child as being poor.

INTERRELATIONSHIPS AMONG MEASURES

Interrelationships Among Marital Interaction Measures

Table VIII displays the zero-order Pearson correlations among the marital interaction measures. Companionship, cooperation, and cohesion are significantly, strongly, and positively intercorrelated. Consensus is

weakly but positively related to cohesion and companionship, but is unrelated to cooperation.

TABLE VIII
CORRELATIONS AMONG THE MARITAL INTERACTION MEASURES
(ZERO-ORDER PEARSON)

	<u>Cohesion</u>	<u>Companionship</u>	<u>Cooperation</u>
<u>Companionship</u>	.179***		
<u>Cooperation</u>	.249***	.406***	
<u>Consensus</u>	.061*	.059*	.032

*Significant at $p = .05$.

**Significant at $p = .01$.

***Significant at $p = .001$.

Interrelationships Among Sociodemographic, Health, and Marital Interaction Measures

Correlations between the sociodemographic variables and the health and well-being measures are given in Table IX and correlations between the marital interaction measures and the sociodemographic variables in Table X. As Table IX indicates, the sociodemographic variables are significantly related to many of the health and well-being measures for both husbands and wives. Hence, their inclusion as control variables is important for the analysis.

All correlations in Table X involving cooperation and companionship are statistically significant. Education is significantly related to each of the interaction measures

TABLE IX
CORRELATIONS BETWEEN THE SOCIODEMOGRAPHIC VARIABLES
AND THE HEALTH AND WELL-BEING VARIABLES
(ZERO-ORDER PEARSON)

	<u>Sociodemographic Variables</u>			
	<u>Age</u>	<u>Education</u>	<u>SES</u>	<u>Length of Marriage</u>
A. <u>For Husbands</u>				
<u>Health and Well-Being Variables (Survey)</u>				
General Health Status	-.271***	.231***	.125***	-.214***
Self-Esteem	.072*	-.103***	-.047	.070*
Mental Health Status	.019	.060*	.012	.024
<u>Health Variables (Utilization)</u>				
Chronic Disease	.327***	-.117***	-.018	.226***
Trauma	-.134***	-.043	-.143***	-.108***
Acute Disease	.098***	-.065*	-.069*	.077**
Emotion-Related Disease	.116***	-.038	-.009	.092**
B. <u>For Wives</u>				
<u>Health and Well-Being Variables (Survey)</u>				
General Health Status	-.291***	.257***	.161***	-.244***
Self-Esteem	.060*	-.031	-.007	.058*
Mental Health Status	.013	.106***	.096**	.020
<u>Health Variables (Utilization)</u>				
Chronic Disease	.229***	-.006	.025	.186***
Trauma	.017	-.093**	-.073*	-.029
Acute Disease	.061*	-.011	-.039	.058*
Emotion-Related Disease	-.034	.030	.029	-.049

*Significant at $p = .05$.
**Significant at $p = .01$.
***Significant at $p = .001$.

TABLE X
 CORRELATIONS BETWEEN THE MARITAL INTERACTION MEASURES
 AND THE SOCIODEMOGRAPHIC VARIABLES
 (ZERO-ORDER PEARSON)

<u>Sociodemographic Variables</u>	<u>Marital Interaction Measures</u>			
	<u>Cooperation</u>	<u>Companionship</u>	<u>Cohesion</u>	<u>Consensus</u>
Age (Husbands)	-.078**	-.084**	-.033	.010
Age (Wives)	-.074*	-.059*	-.041	.005
Education	.166***	.127***	.059*	.110***
SES	.085**	.080**	.050	.090**
Length of Marriage	-.055*	-.064*	-.017	.077**

*Significant at $p = .05$.

**Significant at $p = .01$.

***Significant at $p = .001$.

and SES to all except cohesion. Length of marriage and age are significantly but negatively related to cooperation, companionship and cohesion. Consensus, however, is directly related to the length of marriage though it is unrelated to age.

RESEARCH HYPOTHESES

Relationship of Marital Interaction and Health

Are higher levels of marital cohesion, companionship, cooperation, and consensus related to higher levels of health and well-being? Which marital variable(s) appear(s) to be more strongly and significantly related to health and well-being?

Table XI presents the correlations between the marital interaction measures and the health and well-being variables for husbands, and Table XII for wives. Most striking is the fact that significant relationships between marital interaction and health occur more frequently when health is measured by means of self-reported and survey data than by rates of medical utilization for the several disease categories. In fact, for wives there are no significant relationships between marital interaction and the utilization of medical services. For husbands, only four of the sixteen correlations are significant (each at the .05 level). The more cooperative and cohesive the marital relationship the less likely that husbands will

TABLE XI
 CORRELATIONS BETWEEN THE MARITAL INTERACTION MEASURES
 AND THE HEALTH AND WELL-BEING VARIABLES FOR HUSBANDS
 (ZERO-ORDER PEARSON)

	<u>Marital Interaction Measures</u>			
	<u>Cooperation</u>	<u>Companionship</u>	<u>Cohesion</u>	<u>Consensus</u>
<u>Health and Well-Being Variables (Survey)</u>				
Current Health	.112***	.125***	.165***	-.002
Self-Esteem	.073*	.070*	.144***	-.036
Mental Health Status	.085**	.105***	.120***	-.002
<u>Health Variables (Utilization)</u>				
Chronic Disease (Treatable)	-.022	-.027	.006	.064*
Trauma (Injuries, etc.)	-.022	.022	-.064*	-.035
Acute Disease	.034	.028	-.031	.027
Emotion-Related Disease	-.056*	-.026	-.071*	.050

*Significant at $p = .05$.

**Significant at $p = .01$.

***Significant at $p = .001$.

TABLE XII
 CORRELATIONS BETWEEN THE MARITAL INTERACTION MEASURES
 AND THE HEALTH AND WELL-BEING VARIABLES FOR WIVES
 (ZERO-ORDER PEARSON)

	<u>Marital Interaction Measures</u>			
	<u>Cooperation</u>	<u>Companionship</u>	<u>Cohesion</u>	<u>Consensus</u>
<u>Health and Well-Being Variables (Survey)</u>				
Current Health	.114***	.128***	.162***	.038
Self-Esteem	-.096**	.015	.144***	.048
Mental Health Status	.114***	.057*	.167***	.080**
<u>Health Variables (Utilization)</u>				
Chronic Disease (Treatable Symptoms)	-.047	-.044	-.034	.043
Trauma (Injuries, etc.)	.015	.037	-.044	-.003
Acute Disease	-.033	-.013	-.000	.007
Emotion-Related Disease	-.026	.001	-.041	-.042

*Significant at $p = .05$.
 **Significant at $p = .01$.
 ***Significant at $p = .001$.

have used services for emotion-related diseases. For husbands, higher cohesion also relates to using fewer services for trauma and related conditions. In contrast, the use of services for chronic diseases is more likely for husbands among couples higher in consensus.

The relationships between self-reported health and well-being and marital interaction are similar for husbands and wives. For both spouses, more highly cohesive, cooperative and companionable marriages are related to better current health and well-being except in the case of wives' self-esteem. For wives there is no relationship between self-esteem and companionship and consensus and the relationship to cooperation is negative rather than positive. For husbands, consensus bears no relationship to health and well-being, though for wives, consensus is positively related to mental health status.

The results of the stepwise regressions of sociodemographic and marital interaction variables on the various measures of health and well-being are displayed in Table XIII. Marital interaction, especially its cohesion dimension, plays a prominent role in explaining self-esteem, and both general and mental health status. As indicated in Table XIII-A, cohesion enters the regressions first for both husbands and wives when self-esteem is the dependent variable. This is followed by education for husbands and by age, cooperation, and childhood health for wives. Those

TABLE XIII

STEPWISE REGRESSION OF SOCIODEMOGRAPHIC VARIABLES AND MARITAL INTERACTION
MEASURES ON HEALTH AND WELL-BEING OF HUSBANDS AND WIVES

		<u>Regression Analysis</u>					
		<u>Multiple R</u>	<u>Rsq.</u>	<u>Rsq. change</u>	<u>Sig.</u>	<u>Beta</u>	<u>Sig.</u>
I. <u>Health and Well-Being Variables (Survey)</u>							
A. <u>Self-Esteem</u>							
<u>For Husbands</u>							
Cohesion		.144	.0208	.0208	.000	.151	.000
Education		.182	.0332	.0124	.001	-.111	.001
<u>For Wives</u>							
Cohesion		.144	.0206	.0206	.000	.125	.000
Age		.158	.0250	.0043	.042	.075	.021
Cooperation		.172	.0295	.0045	.038	.069	.038
Childhood Health		.184	.0339	.0044	.039	.067	.039
B. <u>General Health Status</u>							
<u>For Husbands</u>							
Age		.270	.0733	.0733	.000	-.204	.000
Childhood Health		.368	.1355	.0622	.000	.232	.000
Cohesion		.394	.1550	.0196	.000	.135	.000
Education		.408	.1668	.0118	.000	.118	.000
<u>For Wives</u>							
Age		.291	.0846	.0846	.000	-.210	.000
Childhood Health		.359	.1291	.0445	.000	-.200	.000
Education		.393	.1542	.0251	.000	.156	.000
Cohesion		.414	.1709	.0167	.000	.118	.000
Companionship		.419	.1753	.0043	.027	.067	.027
C. <u>Mental Health Status</u>							
<u>For Husbands</u>							
Childhood Health		.154	.0236	.0236	.000	.140	.000
Cohesion		.189	.0356	.0120	.001	.097	.004
Companionship		.202	.0409	.0053	.029	.074	.029

TABLE XIII, CONTINUED

		<u>Regression Analysis</u>					
		<u>Multiple R</u>	<u>Rsq.</u>	<u>Rsq. change</u>	<u>Sig.</u>	<u>Beta</u>	<u>Sig.</u>
C. <u>Mental Health Status Cont.</u>							
<u>For Wives</u>							
	Cohesion	.167	.0278	.0278	.000	.154	.000
	Childhood Health	.212	.0451	.0173	.000	.133	.000
	Education	.231	.0536	.0084	.006	.118	.001
	Age	.241	.0581	.0045	.042	-.072	.042
II. <u>Health Variables (Utilization)</u>							
A. <u>Chronic Disease</u>							
<u>For Husbands</u>							
	Age	.327	.1072	.1072	.000	.446	.000
	Length of Marriage	.336	.1128	.0056	.016	-.146	.007
	Consensus	.343	.1177	.0049	.023	.071	.023
<u>For Wives</u>							
	Age	.229	.0523	.0523	.000	.256	.000
	Education	.244	.0594	.0071	.008	.092	.007
	Childhood Health	.258	.0663	.0069	.009	-.083	.009
B. <u>Trauma</u>							
<u>For Husbands</u>							
	SES	.143	.0205	.0205	.000	-.163	.000
	Age	.210	.0442	.0237	.000	-.155	.000
<u>For Wives</u>							
	Childhood Health	.102	.0104	.0104	.002	-.103	.002
	Education	.136	.0184	.0080	.006	-.113	.001
	Length of Marriage	.152	.0232	.0048	.033	-.073	.033
C. <u>Acute Disease</u>							
<u>For Husbands</u>							
	Age	.098	.0096	.0096	.003	.098	.003
<u>For Wives</u>							
	Childhood Health	.101	.0103	.0103	.002	-.101	.002

TABLE XIII, CONTINUED

	<u>Regression Analysis</u>					
	<u>Multiple R</u>	<u>Rsq.</u>	<u>Rsq. change</u>	<u>Sig.</u>	<u>Beta</u>	<u>Sig.</u>
D. <u>Emotion-Related Disease</u>						
<u>For Husbands</u>						
Age	.116	.0134	.0134	.000	.114	.000
Cohesion	.134	.0179	.0045	.039	-.067	.039
<u>For Wives</u>						
Childhood Health	.091	.0084	.0084	.005	-.091	.005

most likely to have greater self-esteem are husbands and wives higher in marital cohesion, husbands who are less educated, wives who are older, wives from couples higher in cooperation, and wives with better childhood health.

Cohesion also enters the regression first for wives and second, after childhood health, for husbands when mental health status is the dependent variable (see Table XIII-C). Cohesion is followed by childhood health, education, and age for wives and by companionship for husbands. Those most likely to enjoy better mental health are husbands and wives who had better health in childhood, husbands and wives who have more cohesive relationships, husbands among couples higher in companionship, and wives who are younger and more highly educated.

Table XIII-B presents the regressions on general health status. Cohesion, although included in the equations, is the third variable to be entered behind age, childhood health, and education for wives. It is the second variable to be entered behind age and childhood health for husbands. Education is also included in the regression for husbands and companionship in the regression for wives. Better general health status is more characteristic of husbands and wives who are younger, more highly educated, and more cohesive in their spousal relationship. Better general health status is also more characteristic of husbands who had better health during childhood, wives who

had poorer health during childhood, and wives among couples higher in companionship.

Length of marriage, SES, and consensus fail to enter any of the above regression equations based on survey data.

Tables XIII-D through XIII-G demonstrate that the dimensions of marital interaction are conspicuously uninvolved in explaining health as measured by utilization behavior. Marital interaction variables appear only twice and only in the equations for husbands' utilization. Consensus is the third variable to enter the regression when utilization for chronic disease by husbands is the dependent variable. Its influence, however, is opposite that expected, i.e., higher consensus is more highly related to the use of services for chronic disease. Cohesion enters as the second variable when use of services for emotion-related disease by husbands is the dependent variable. Here the relationship is in the expected direction, i.e., higher cohesion is associated with less utilization of services for emotion-related disease. In both instances, the marital interaction variables contribute only a very small R square change.

For husbands, age is usually the first and certainly the most frequently appearing explanatory variable in the regression equations on utilization for each of the four disease categories. For wives, health status in childhood has this distinction.

Older husbands use more services for chronic, acute, and emotion-related disease. It is the younger and lower SES husbands, however, who use more services for trauma and related disorders. Similarly, wives with less education and shorter length of marriage use more services for trauma and related disorders. Wives with better childhood health are less likely to use services for any of the four disease categories. But older and more educated wives, just as older husbands (and husbands with shorter length of marriage), are more likely to use services for chronic disease.

Neither cooperation nor companionship enters any of the regression equations (for either husbands or wives) for the utilization variables.

For the sake of parsimony, an attempt was made to develop an index of marital integration by combining all four of the marital interaction variables.¹² This index was then used in a sample set of regressions similar to those in Table XIII (See Table XIV). In nearly every regression performed, marital integration enters the equation precisely at the point where one of its components had entered in Table XIII. Instead of improving the explanatory power of the marital variables, the index

¹²The number of categories within each marital variable was either increased or decreased so that each variable would have an equal number (4). This procedure, in effect, weighted each variable equally when they were combined in the index.

TABLE XIV

STEPWISE REGRESSION OF SOCIODEMOGRAPHIC VARIABLES AND MARITAL INTEGRATION
INDEX ON SELECTED HEALTH AND WELL-BEING VARIABLES
OF HUSBANDS AND WIVES

		<u>Regression Analysis</u>					
		<u>Multiple R</u>	<u>Rsq.</u>	<u>Rsq. change</u>	<u>Sig.</u>	<u>Beta</u>	<u>Sig.</u>
A.	<u>Self-Esteem</u>						
	<u>For Husbands</u>						
	Integration	.116	.0133	.0133	.000	.139	.000
	Education	.171	.0292	.0159	.000	-.128	.000
	<u>For Wives</u>						
	Integration	.139	.0192	.0192	.000	.139	.000
B.	<u>General Health Status</u>						
	<u>For Husbands</u>						
	Age	.271	.0733	.0733	.000	-.211	.000
	Childhood Health	.368	.1355	.0622	.000	.235	.000
	Integration	.387	.1498	.0143	.000	.102	.001
	Education	.398	.1587	.0089	.002	.105	.002
	<u>For Wives</u>						
	Age	.291	.0846	.0846	.000	-.220	.000
	Childhood Health	.359	.1291	.0445	.000	.200	.000
	Education	.393	.1542	.0251	.000	.147	.000
	Integration	.408	.1667	.0125	.000	.114	.000
C.	<u>Mental Health Status</u>						
	<u>For Husbands</u>						
	Childhood Health	.154	.0236	.0236	.000	.145	.000
	Integration	.198	.0390	.0154	.000	.124	.000
	<u>For Wives</u>						
	Integration	.185	.0342	.0342	.000	.161	.000
	Childhood Health	.225	.0505	.0163	.000	.126	.000
	Education	.235	.0554	.0049	.036	.071	.036
D.	<u>Emotion-Related</u>						
	<u>For Husbands</u>						
	Age	.116	.0134	.0134	.000	.116	.000
	<u>For Wives</u>						
	Childhood Health	.091	.0084	.0084	.005	-.091	.005

actually weakens their overall effect by diluting the influence of the strongest components (mainly cohesion). The index was therefore not utilized in further analyses.

Means for the health measures are compared for husbands and wives in the upper and lower halves of the distribution for each marital variable in Table XV. A procedure which compares at the extremes of a distribution on the independent variable enables mean differences in the dependent variable to more readily emerge and gives one an opportunity to examine the magnitude of these differences both within and between the husband and wife groups. The findings reported in Table XV are essentially the same as those reported in Table XIII. In Table XV, however, cooperation accounts for differences in all three survey-related health measures in comparison to its influence only in relationship to self-esteem for wives in Table XIII. Also, there are significant differences in trauma between high and low groups of husbands and wives on cohesion in Table XV, while cohesion did not appear to be related to trauma in Table XIII.

In short, higher levels of the marital interaction variables are related to selected measures of health and well-being. Cohesion is more strongly and significantly related to more of the health and well-being measures than the other marital interaction variables.

TABLE XV

MEANS ON HEALTH AND WELL-BEING MEASURES FOR HUSBANDS AND WIVES
BY HIGH AND LOW CATEGORIES OF THE
MARITAL INTERACTION MEASURES

		Survey Measures							
		Self-Esteem		General Health Status		Mental Health Status			
		Husbands	Wives	Husbands	Wives	Husbands	Wives		
A.	<u>Cohesion</u>								
	High Group	2.79	2.62	1.75	1.77	1.33	2.32		
	Low Group	2.65	2.48	1.94	1.96	1.77	3.15		
	Significance	(.000)	(.000)	(.000)	(.000)	(.001)	(.000)		
		Utilization Measures							
		Chronic		Trauma		Acute		Emotion-Related	
		Husbands	Wives	Husbands	Wives	Husbands	Wives	Husbands	Wives
	High Group	1.38	1.59	.60	.47	.80	1.19	.67	1.16
	Low Group	1.35	1.59	.80	.59	.90	1.16	.85	1.23
	Significance	(NS)	(NS)	(.007)	(.053)	(NS)	(NS)	(.036)	(NS)
		Survey Measures							
		Self-Esteem		General Health Status		Mental Health Status			
		Husbands	Wives	Husbands	Wives	Husbands	Wives		
B.	<u>Companionship</u>								
	High Group	2.75	2.57	1.76	1.77	1.32	2.53		
	Low Group	2.72	2.56	1.89	1.90	1.69	2.78		
	Significance	(NS)	(NS)	(.010)	(.004)	(.004)	(NS)		
		Utilization Measures							
		Chronic		Trauma		Acute		Emotion-Related	
		Husbands	Wives	Husbands	Wives	Husbands	Wives	Husbands	Wives
	High Group	1.30	1.51	.69	.53	.86	1.12	.69	1.16
	Low Group	1.40	1.65	.68	.50	.79	1.19	.79	1.22
	Significance	(NS)	(NS)	(NS)	(NS)	(NS)	(NS)	(NS)	(NS)

Note: For all health and well-being measures except "self-esteem", the smaller the mean, the greater the health and well-being. For "self-esteem", the smaller the mean, the lower the "self-esteem."

Utilization measures represent number of contacts per year for specific illnesses.

Comparison of Husbands and Wives With Respect to the
Marriage/Health Relationship

Is the health and well-being of wives more likely to be affected by marital cohesion, companionship, cooperation, and consensus than the health and well-being of husbands?

Table XIII reveals that the marital interaction variables are present in the regression equations for the survey-related health measures for both husbands and wives. If the total variance explained by the marital variables for each health measure is compared between husbands and wives, it is seen that slightly more variance is explained by the marital variables for wives. The difference is less than one-half of one percent of the variance explained in the case of self-esteem and general health status and about one and one-half percent in the case of mental health status.

When the regressions for the utilization-related health measures in Table XIII are examined, there is a slight tendency for husbands to be affected by marital interaction in relationship to chronic and emotion-related diseases only, but the amount of variance in these health measures explained by the marital interaction variables involved is less than one-half of one percent in both cases. The marital variables enter none of the regressions for wives on these measures.

In summary, there is very little difference between husbands and wives in terms of the effect of the marital variables on their health and well-being. Only on the basis of the number of different health measures affected by one or more of the marital variables can it be said that the health of husbands is affected more by marital interaction (five measures for husbands compared to three measures for wives).

A set of interesting questions emerged in the context of this analysis: Does the "couple" nature of our marital interaction measures make a difference in explaining individual spousal health and well-being? Also, do the measures of marital interaction of one spouse affect the health of the other?

In the description of how the marital interaction measures were constructed it was indicated that measures of cohesion, companionship, and cooperation were first developed for husbands and wives separately based upon their individual responses to survey items. Only then were husband and wife responses combined to create a "couple" measure for these interaction variables. To answer the first question another series of regressions were performed which are summarized in Table XVI. For the regressions on the husband's (wife's) health measures, only the marital variables for the wife (husband) (along with the socioeconomic variables) were entered as independent variables. If the

TABLE XVI

STEPWISE REGRESSION OF SOCIODEMOGRAPHIC VARIABLES AND WIFE'S (HUSBAND'S)
 MARITAL INTERACTION MEASURES ON HUSBAND'S (WIFE'S)
 HEALTH AND WELL-BEING VARIABLES

		<u>Regression Analysis</u>					
		<u>Multiple R</u>	<u>Rsq.</u>	<u>Rsq. change</u>	<u>Sig.</u>	<u>Beta</u>	<u>Sig.</u>
I.	<u>Health and Well-Being Variables (Survey)</u>						
A.	<u>Self-Esteem</u>						
	<u>For Husbands</u>						
	Cohesion (Wife)	.137	.0188	.0188	.000	.147	.000
	Education	.180	.0323	.0135	.000	-.123	.000
	Childhood Health	.190	.0362	.0039	.050	.063	.050
	<u>For Wives</u>						
	Cohesion (Husband)	.134	.0178	.0178	.000	.133	.000
B.	<u>General Health Status</u>						
	<u>For Husbands</u>						
	Age	.271	.0733	.0733	.000	-.209	.000
	Childhood Health	.368	.1355	.0622	.000	.237	.000
	Education	.386	.1486	.0131	.000	.115	.000
	Cohesion (Wife)	.398	.1584	.0098	.001	.099	.001
	<u>For Wives</u>						
	Age	.291	.0846	.0846	.000	-.216	.000
	Childhood Health	.359	.1291	.0445	.000	.200	.000
	Education	.393	.1542	.0251	.000	.173	.000
	Cohesion (Husband)	.404	.1635	.0093	.001	.097	.001
C.	<u>Mental Health Status</u>						
	<u>For Husbands</u>						
	Childhood Health	.154	.0236	.0236	.000	.150	.000
	Cohesion (Wife)	.185	.0343	.0107	.002	.104	.002
	<u>For Wives</u>						
	Childhood Health	.143	.0204	.0204	.000	.127	.000
	Cohesion (Husband)	.188	.0352	.0149	.000	.126	.000
	Education	.215	.0462	.0110	.002	.105	.002

TABLE XVI, CONTINUED

	<u>Regression Analysis</u>					
	<u>Multiple R</u>	<u>Rsq.</u>	<u>Rsq. change</u>	<u>Sig.</u>	<u>Beta</u>	<u>Sig.</u>
II. Health Variables						
<u>(Utilization)</u>						
A. Chronic Disease						
<u>For Husbands</u>						
Age	.327	.1072	.1072	.000	.446	.000
Length of Marriage	.336	.1128	.0056	.015	-.146	.007
Consensus	.343	.1177	.0049	.021	.071	.021
<u>For Wives</u>						
Age	.229	.0523	.0523	.000	.256	.000
Education	.244	.0594	.0071	.008	.092	.007
Childhood Health	.067	.0663	.0069	.008	-.083	.008
B. Trauma						
<u>For Husbands</u>						
SES	.143	.0205	.0205	.000	-.159	.000
Age	.210	.0442	.0237	.000	-.156	.000
Cohesion (Wife)	.220	.0484	.0041	.042	-.064	.042
<u>For Wives</u>						
Childhood Health	.102	.0104	.0104	.002	-.096	.003
Education	.136	.0184	.0080	.006	-.115	.001
Cohesion (Husband)	.155	.0241	.0057	.019	-.074	.023
Length of Marriage	.169	.0286	.0044	.038	-.071	.038
C. Acute						
<u>For Husbands</u>						
Age	.098	.0096	.0096	.002	.098	.002
<u>For Wives</u>						
Childhood Health	.101	.0103	.0103	.002	-.101	.002
D. Emotion-Related						
<u>For Husbands</u>						
Age	.116	.0134	.0134	.000	.115	.000
Cohesion (Wife)	.150	.0225	.0091	.003	-.095	.003
<u>For Wives</u>						
Cohesion (Husband)	.094	.0089	.0089	.004	-.087	.008
Childhood Health	.126	.0158	.0069	.010	-.083	.010

"couple" nature of the marital interaction measures makes no difference in explaining the health of either spouse, we would expect that the marital interaction measures of the opposite spouse would give the same results as those displayed in Table XIII. As Table XVI illustrates, this is precisely what happens. Evidently there is a great deal of "overlapping" information contained in the couple measures so that little information is lost when the marital variables of only one of the partners (in this case the opposite spouse) are utilized.

In an attempt to answer the question about whether the measures of marital interaction of one spouse influence the health of the other, additional regressions were performed. This time the separate marital variables for husbands and wives were entered together in all regressions on the health measures of both husbands and wives (along with the sociodemographic variables). Table XVII displays the results. In most cases the husband's marital interaction measures enter regressions explaining his health and well-being. Similarly, the wife's marital interaction measures enter regressions explaining her health and well-being. There are, however, some interesting exceptions. For emotion-related disease, it is the cohesion measure of one's partner which helps to account for variance in one's own health. In relationship to trauma, it is the husband's measure of cohesion which helps to account for variance in

TABLE XVII

STEPWISE REGRESSION OF SOCIODEMOGRAPHIC VARIABLES AND BOTH HUSBAND'S AND WIFE'S
 MARITAL INTERACTION MEASURES ON HEALTH AND WELL-BEING
 OF HUSBANDS AND WIVES

	<u>Regression Analysis</u>					
	<u>Multiple R</u>	<u>Rsq.</u>	<u>Rsq. change</u>	<u>Sig.</u>	<u>Beta</u>	<u>Sig.</u>
I. <u>Health and Well-Being</u>						
<u>Variables (Survey)</u>						
A. <u>Self-Esteem</u>						
<u>For Husbands</u>						
Cohesion (Husband)	.156	.0244	.0244	.000	.110	.002
Education	.184	.0340	.0095	.002	-.109	.001
Cohesion (Wife)	.206	.0423	.0083	.004	.101	.004
<u>For Wives</u>						
Cohesion (Wife)	.143	.0205	.0205	.000	.106	.003
Cohesion (Husband)	.164	.0270	.0065	.012	.089	.012
B. <u>General Health Status</u>						
<u>For Husbands</u>						
Age	.271	.0733	.0733	.000	-.211	.000
Childhood Health	.368	.1355	.0622	.000	.227	.000
Cohesion (Husband)	.395	.1562	.0207	.000	.148	.000
Education	.412	.1702	.0140	.000	.129	.000
<u>For Wives</u>						
Age	.2908	.0846	.0846	.000	-.209	.000
Childhood Health	.3593	.1291	.0445	.000	.208	.000
Education	.3927	.1542	.0251	.000	.150	.000
Cohesion (Wife)	.4093	.1675	.0133	.000	.098	.001
Companionship (Wife)	.4184	.1751	.0076	.003	.090	.003
C. <u>Mental Health Status</u>						
<u>For Husbands</u>						
Childhood Health	.154	.0236	.0236	.000	.143	.000
Cohesion (Husband)	.203	.0413	.0177	.000	.134	.000
<u>For Wives</u>						
Cohesion (Wife)	.224	.0499	.0499	.000	.211	.000
Childhood Health	.261	.0682	.0183	.000	.132	.000
Education	.273	.0747	.0064	.014	.081	.014

TABLE XVII, CONTINUED

	<u>Regression Analysis</u>					
	<u>Multiple R</u>	<u>Rsq.</u>	<u>Rsq. change</u>	<u>Sig.</u>	<u>Beta</u>	<u>Sig.</u>
II. Health Variables						
<u>(Utilization)</u>						
A. Chronic Disease						
<u>For Husbands</u>						
Age	.327	.1072	.1072	.000	.446	.000
Length of Marriage	.336	.1128	.0056	.015	-.146	.007
Consensus	.343	.1177	.0049	.022	.071	.022
<u>For Wives</u>						
Age	.229	.0523	.0523	.000	.256	.000
Education	.244	.0594	.0071	.008	.092	.007
Childhood Health	.258	.0663	.0069	.008	-.083	.008
B. Trauma						
<u>For Husbands</u>						
SES	.143	.0205	.0205	.000	-.163	.000
Age	.210	.0445	.0237	.000	-.152	.000
Cohesion (Husband)	.223	.0499	.0057	.018	-.075	.018
<u>For Wives</u>						
Childhood Health	.102	.0104	.0104	.002	-.096	.003
Education	.136	.0184	.0080	.006	-.115	.001
Cohesion (Husband)	.155	.0241	.0057	.019	-.074	.023
Length of Marriage	.169	.0286	.0044	.038	-.071	.038
C. Acute						
<u>For Husbands</u>						
Age	.098	.0096	.0096	.003	.098	.003
<u>For Wives</u>						
Childhood Health	.101	.0103	.0103	.002	-.101	.002
D. Emotion-Related						
<u>For Husbands</u>						
Age	.116	.0134	.0134	.000	.115	.000
Cohesion (Wife)	.150	.0225	.0091	.003	-.095	.003
<u>For Wives</u>						
Cohesion (Husband)	.094	.0089	.0089	.004	-.087	.008
Childhood Health	.126	.0158	.0069	.010	-.083	.010

trauma experienced not only by himself but also by his wife. And, in terms of self-esteem, the measure of cohesion of one's spouse adds something to one's own measure of cohesion in explaining variation in one's feelings about oneself.¹³

A comparison of the regression findings of Tables XIII, XVI, and XVII is more easily made in Figure 3 (p. 107) which lists the independent variables in each column in their relative order of importance in explaining the various measures of health and well-being for husbands and wives for the various regressions.

Comparative Effects of the Marital Relationship on the Health and Well-Being Measures

Are diseases with a high emotional content more likely to reflect variation in marital cohesion, companionship, cooperation, and consensus than other types of illness?

In reviewing the regression tables presented thus far (Tables XIII, XVI, and XVII), it is observed that there is a slight tendency for variation in emotion-related disease and trauma to be more influenced by marital interaction

¹³The separate cohesion measures for husbands and wives have a correlation of .421. For companionship and cooperation, the correlations are .410 and .207 respectively. This suggests that while the marital perceptions of husbands and wives are significantly related, there is enough divergence in perspective for the separate husband/wife measures to operate somewhat independently (at least in a statistical sense).

than chronic or acute disease for both husbands and wives. These differences among diseases measured by rates of utilization are not as great, however, as the differences between the impact of marital interaction on these measures of health and on the survey-related health measures. The contributions of the marital variables in accounting for variance in self-esteem and both general and mental health status for both husbands and wives is consistently greater than for the utilization-related health measures. Within the survey-related measures of health, the marital variables are more important (in terms of order of entry into regression equations) in explaining the well-being measures (self-esteem and mental health status) rather than general health status.

Summarizing these results, the evidence suggests that health measures most susceptible to the influence of the emotions, namely the well-being measures and emotion-related disease and trauma, are most likely to reflect variation in the marital interaction variables.

The Direction of the Marriage/Health Relationship

Do marital cohesion, companionship, cooperation, and consensus influence health and well-being independent of

the effect of health and well-being on these marital variables?¹⁴

In pursuing this question of causal direction the approach used by Pratt (1976) who partialled out the effects of health on the marriage relationship by controlling for health in childhood will be followed. One must assume, of course, that childhood health is a relatively good indicator of pre-marital health status. As was true for Pratt, the data available offer no better alternative.

The correlations of childhood health with the various measures of current health and the marital interaction variables are given in Table XVIII. Since childhood health is significantly associated with both health and marital interaction, it is wise to consider its effects in the analysis which follows.

Table XIX exhibits the results of a regression analysis in which childhood health has been forced to enter each regression equation first before proceeding with the stepwise procedure. If the marital variables enter a regression equation after childhood health has explained as much of the variance in health as it can, it can be said that they have an effect on health independent of childhood health. The magnitude of such an effect, if there is one,

¹⁴The literature refers to this question as the "selection" versus "protection" hypothesis. Do persons with apparently good health "select" each other for marriage? Or, does marriage "protect" spouses from illness?

TABLE XVIII

CORRELATIONS BETWEEN CHILDHOOD HEALTH AND THE MARITAL INTERACTION MEASURES
AND HEALTH AND WELL-BEING MEASURES FOR HUSBANDS AND WIVES

<u>Marital Interaction Measures</u>	<u>Childhood Health</u>	
	<u>Husbands</u>	<u>Wives</u>
Cohesion	.067*	.068*
Companionship	-.099**	-.037
Cooperation	-.035	-.027
Consensus	.001	-.057*
 <u>Health and Well-Being Measures</u>		
Self-Esteem	.056*	.072*
General Health Status	.267***	.231***
Mental Health Status	.154***	.143***
Chronic Disease	-.026	-.098***
Trauma	-.030	-.102***
Acute Disease	-.039	-.101***
Emotion-Related Disease	-.038	-.091**

*Significant at $p = .05$.

**Significant at $p = .01$.

***Significant at $p = .001$.

TABLE XIX

STEPWISE REGRESSION OF SOCIODEMOGRAPHIC VARIABLES AND MARITAL INTERACTION
MEASURES ON HEALTH AND WELL-BEING OF HUSBANDS AND WIVES
AFTER FORCING ENTRY OF CHILDHOOD HEALTH

		<u>Regression Analysis</u>					
		<u>Multiple R</u>	<u>Rsq.</u>	<u>Rsq. change</u>	<u>Sig.</u>	<u>Beta</u>	<u>Sig.</u>
I. <u>Health and Well-Being Variables (Survey)</u>							
A. <u>Self-Esteem</u>							
<u>For Husbands</u>							
Childhood Health		.056	.0031	.0031	.089	.058	.074
Cohesion		.151	.0229	.0198	.000	.147	.000
Education		.191	.0365	.0136	.000	-.117	.000
<u>For Wives</u>							
Childhood Health		.072	.0052	.0052	.028	.067	.039
Cohesion		.157	.0245	.0194	.000	.125	.000
Age		.172	.0294	.0049	.030	.075	.021
Cooperation		.184	.0339	.0045	.038	.069	.038
B. <u>General Health Status</u>							
<u>For Husbands</u>							
Childhood Health		.267	.0713	.0713	.000	.231	.000
Age		.368	.1355	.0642	.000	-.204	.000
Cohesion		.394	.1550	.0196	.000	.135	.000
Education		.408	.1668	.0118	.000	.118	.000
<u>For Wives</u>							
Childhood Health		.231	.0534	.0534	.000	.200	.000
Age		.359	.1291	.0757	.000	-.210	.000
Education		.393	.1542	.0251	.000	.156	.000
Cohesion		.414	.1709	.0167	.000	.118	.000
Companionship		.419	.1753	.0043	.027	.067	.027
C. <u>Mental Health Status</u>							
<u>For Husbands</u>							
Childhood Health		.154	.0236	.0236	.000	.140	.000
Cohesion		.189	.0356	.0120	.000	.097	.004
Companionship		.202	.0409	.0053	.000	.074	.029
<u>For Wives</u>							
Childhood Health		.143	.0204	.0204	.000	.133	.000
Cohesion		.213	.0451	.0248	.000	.154	.000
Education		.231	.0536	.0084	.006	.118	.001
Age		.241	.0581	.0045	.042	.072	.042

TABLE XIX, CONTINUED

		<u>Regression Analysis</u>					
		<u>Multiple R</u>	<u>Rsq.</u>	<u>Rsq. change</u>	<u>Sig.</u>	<u>Beta</u>	<u>Sig.</u>
II. Health Variables							
<u>(Utilization)</u>							
A. Chronic Disease							
<u>For Husbands</u>							
Childhood Health		.026	.0007	.0007	.420	-.000	.928
Age		.328	.1072	.1065	.000	.446	.000
Length of Marriage		.336	.1128	.0055	.016	-.146	.007
Consensus		.343	.1177	.0049	.023	.071	.023
<u>For Wives</u>							
Childhood Health		.098	.0097	.0097	.003	-.083	.009
Age		.243	.0590	.0494	.000	.257	.000
Education		.258	.0663	.0073	.007	.092	.007
B. Trauma							
<u>For Husbands</u>							
Childhood Health		.030	.0009	.0009	.364	-.025	.430
SES		.144	.0208	.0199	.000	-.161	.000
Age		.212	.0449	.0241	.000	-.157	.000
<u>For Wives</u>							
Childhood Health		.102	.0104	.0104	.002	-.103	.002
Education		.136	.0184	.0080	.006	-.113	.001
Length of Marriage		.152	.0232	.0048	.033	-.073	.033
C. Acute							
<u>For Husbands</u>							
Childhood Health		.039	.0015	.0015	.235	-.032	.321
Age		.103	.0106	.0091	.003	.096	.003
<u>For Wives</u>							
Childhood Health		.101	.0103	.0103	.002	-.101	.002
D. Emotion-Related							
<u>For Husbands</u>							
Childhood Health		.038	.0015	.0015	.241	-.026	.417
Age		.120	.0144	.0129	.000	.112	.001
Cohesion		.136	.0186	.0042	.045	-.065	.045
<u>For Wives</u>							
Childhood Health		.091	.0084	.0084	.005	-.091	.005

is given by changes in R-square brought about by the addition of a marital variable. Table XIX reveals that such an effect exists for each marital variable which originally appeared in each regression (for both husbands and wives) in Table XIII. The changes in R-square for the marital variables are also very similar to those in Table XIII. Support is therefore given to the hypothesis that marriage helps to "protect" the health and well-being of husbands and wives i.e., that marital interaction influences health and well-being independent of the effect of health and well-being on marital interaction.

An alternative test of the "protection" hypothesis was performed by means of a regression analysis utilizing only those husbands and wives in the study population who experienced "excellent" health in childhood. Does marital interaction still make a difference when childhood health is controlled? Table XX indicates that most of the marital variables remain in the various regressions when compared to Table XIII. Notable exceptions, however, are that cohesion no longer helps to explain mental health status and emotion-related disease for husbands. For the case of trauma, however, cohesion is added to the regression. For wives, cohesion is removed from the explanation of general health status. These findings suggest that marital interaction does influence health and well-being but for the

TABLE XX

STEPWISE REGRESSION OF SOCIODEMOGRAPHIC VARIABLES AND MARITAL INTERACTION
MEASURES ON HEALTH AND WELL-BEING OF HUSBANDS AND WIVES
WHO HAD EXCELLENT HEALTH DURING CHILDHOOD

		<u>Regression Analysis</u>					
		<u>Multiple R</u>	<u>Rsq.</u>	<u>Rsq. change</u>	<u>Sig.</u>	<u>Beta</u>	<u>Sig.</u>
I.	<u>Health and Well-Being Variables (Survey)</u>						
A.	<u>Self-Esteem</u>						
	<u>For Husbands</u>						
	Cohesion	.161	.0260	.0260	.001	.165	.000
	Education	.213	.0453	.0193	.003	-.139	.003
	<u>For Wives</u>						
	Cohesion	.124	.0152	.0152	.012	.123	.012
B.	<u>General Health Status</u>						
	<u>For Husbands</u>						
	Age	.316	.1000	.1000	.000	-.309	.000
	Cohesion	.330	.1091	.0090	.035	.095	.035
	<u>For Wives</u>						
	Age	.296	.0876	.0876	.000	-.282	.000
	Companionship	.324	.1050	.0174	.005	.128	.006
	SES	.337	.1135	.0085	.047	.093	.047
C.	<u>Mental Health Status</u>						
	<u>For Husbands</u>						
	(No variables entered the equation)						
	<u>For Wives</u>						
	Cohesion	.168	.0283	.0283	.001	.168	.001
II.	<u>Health Variables (Utilization)</u>						
A.	<u>Chronic Disease</u>						
	<u>For Husbands</u>						
	Age	.283	.0799	.0799	.000	.283	.000
	<u>For Wives</u>						
	Age	.156	.0242	.0242	.001	.202	.000
	Education	.198	.0390	.0152	.011	.132	.011

TABLE XX, CONTINUED

		<u>Regression Analysis</u>					
		<u>Multiple R</u>	<u>Rsq.</u>	<u>Rsq. change</u>	<u>Sig.</u>	<u>Beta</u>	<u>Sig.</u>
B. <u>Trauma</u>							
<u>For Husbands</u>							
	Cohesion	.127	.0162	.0162	.007	-.133	.004
	Age	.178	.0315	.0154	.009	-.151	.002
	SES	.230	.0530	.0215	.002	-.149	.002
<u>For Wives</u>							
	SES	.096	.0093	.0093	.049	-.096	.049
C. <u>Acute</u>							
<u>For Husbands</u>							
	Length of Marriage	.114	.0129	.0129	.017	.103	.031
	SES	.151	.0230	.0099	.035	-.100	.035
<u>For Wives</u>							
(No variables entered the equation)							
D. <u>Emotion-Related</u>							
<u>For Husbands</u>							
	Age	.116	.0134	.0134	.015	.116	.015
<u>For Wives</u>							
(No variables entered the equation)							

(A) Using Joint Interaction Measures - From Table XIII	(B) Using Interaction Measures of the Partner - From Table XVI	(C) Using Interaction Measures of Husband & Wife Simultaneously - From Table XVII	(D) Using Joint Interaction Measures but Selecting on Excellent for Childhood Health - From Table XX
SELF-ESTEEM			
Husbands			
Cohesion (Joint) Education	Cohesion (Wife) Education Childhood Health	Cohesion (Husband) Education Cohesion (Wife)	Cohesion (Joint) Education
Wives			
Cohesion (Joint) Age Cooperation (Joint) Childhood Health	Cohesion (Husband)	Cohesion (Wife) Cohesion (Husband)	Cohesion (Joint)
GENERAL HEALTH STATUS			
Husbands			
Age Childhood Health Cohesion (Joint) Education	Age Childhood Health Education Cohesion (Wife)	Age Childhood Health Cohesion (Husband) Education	Age Cohesion (Joint)
Wives			
Age Childhood Health Education Cohesion (Joint) Companionship (Joint)	Age Childhood Health Education Cohesion (Husband)	Age Childhood Health Education Cohesion (Wife) Companionship (Wife)	Age Companionship (Joint) SES
MENTAL HEALTH STATUS			
Husbands			
Childhood Health Cohesion (Joint) Companionship (Joint)	Childhood Health Cohesion (Wife)	Childhood Health Cohesion (Husband)	-- -- --

Figure 3. Comparison of regression analyses.

Wives			
Cohesion (Joint)	Childhood Health	Cohesion (Wife)	Cohesion (Joint)
Childhood Health	Cohesion (Husband)	Childhood Health	
Education	Education	Education	
Age			
CHRONIC DISEASE			
Husbands			
Age	Age	Age	Age
Length of Marriage	Length of Marriage	Length of Marriage	
Consensus (Joint)	Consensus (Joint)	Consensus (Joint)	
Wives			
Age	Age	Age	Age
Education	Education	Education	Education
Childhood Health	Childhood Health	Childhood Health	
TRAUMA			
Husbands			
SES	SES	SES	Cohesion (Joint)
Age	Age	Age	Age
	Cohesion (Wife)	Cohesion (Husband)	SES
Wives			
Childhood Health	Childhood Health	Childhood Health	SES
Education	Education	Education	
Length of Marriage	Cohesion (Husband)	Cohesion (Husband)	
	Length of Marriage	Length of Marriage	
ACUTE DISEASE			
Husbands			
Age	Age	Age	Length of Marriage
			SES
Wives			
Childhood Health	Childhood Health	Childhood Health	— — —
EMOTION-RELATED DISEASE			
Husbands			
Age	Age	Age	Age
Cohesion (Joint)	Cohesion (Wife)	Cohesion (Wife)	
Wives			
Childhood Health	Cohesion (Husband)	Cohesion (Husband)	— — —
	Childhood Health	Childhood Health	

Figure 3. (Continued)

very healthy its influence is somewhat diminished for certain of the health measures.

CHAPTER V

SUMMARY AND DISCUSSION

Although the amount of variance explained is small, the findings provide some support for the hypothesis that better health is associated with higher levels of marital interaction. In particular, the cohesion dimension of marital interaction appears as the most important in explaining health and well-being. There is some suggestion that marital interaction has a greater influence on the health of husbands than wives, but the difference is slight. Self-evaluated health and well-being is more sensitive to variation in the marital relationship than clinical data. Within this context measures of health and well-being which tend to be more affect-related (emotion-related disease, trauma, self-esteem, and mental health status) are also those most likely to be influenced by the marital relationship. These are also the measures which are most affected by the spouse's perceptions of the marital relationship. The effect of marital interaction on health and well-being is independent of the health status one brings to a marriage.

What might account for the importance of cohesion? First, given the relatively high intercorrelations among

cohesion, companionship, and cooperation (see Table VIII), it may be that companionable and cooperative activities within a marriage are the behaviors which help to produce cohesion. In effect, spouses who engage in more joint activities, especially during periods of leisure, may have greater opportunity to understand and appreciate each other and hence feel happy about their relationship. On the other hand, the reverse may also be true. The number and quality of joint activities may be a reflection of pre-existing levels of cohesion (Orthner, 1976). In any case, as Table XXI reveals, the "happiness" aspect of marital cohesion in this study is, in fact, more strongly associated with companionship and cooperation than its other components (shared times of laughing, chatting, and worry about getting along with spouse). Cohesion may, therefore, be taking something of companionship and cooperation into account when it is regressed on the various health measures.

Second, given the importance of the "happiness" aspect of cohesion in marriage, it is possible that the measure of cohesion utilized in this study is only a part, but perhaps a very important part, of a much broader or more global measure of happiness and general well-being. If this is the case, and recent research suggests this is true (Glenn, 1981; Orden and Bradburn, 1973), marital cohesion may conceptually overlap with other subjective

prominent in relation to survey-based (subjective) rather than utilization-based (objective) measures of health in this study.

TABLE XXI

CORRELATIONS BETWEEN COMPANIONSHIP AND COOPERATION AND THE COMPONENTS OF THE MARITAL COHESION INDEX (ZERO-ORDER PEARSON)

<u>Marital Interaction Measures</u>	<u>Components of Marital Cohesion Index</u>		
	<u>Happiness</u>	<u>Worry</u> <u>(For Husbands)</u>	<u>Communication</u> <u>(Chat/Laugh)</u>
Companionship	.133***	.001	.063*
		<u>(For Wives)</u>	
Cooperation	.188***	.071*	.167***
		<u>(For Husbands)</u>	
	.164***	.046	.146***
		<u>(For Wives)</u>	
	.260***	.130***	.182***

*Significant at $p = .05$.

**Significant at $p = .01$.

***Significant at $p = .001$.

Third, factors which stimulate or contribute to the development of certain illnesses, such as emotion-related disease, may be more easily triggered by the absence of or weakness of the affective qualities of marital interaction as opposed to the cognitive or behavioral content of marital interaction. The findings suggest that spouses who

enjoy higher levels of marital cohesion (an affective quality) may experience higher levels of health and well-being even though they may not share a high degree of consensus (a cognitive quality).

Why was consensus not helpful in explaining health in this study? It is likely that the measure of consensus used here is too limited. Religious homogeneity probably reflects not so much the conscious integration of world views on the part of spouses but rather a by-product of homogeneity with respect to other elements of homogamy in spouse selection, e.g., SES, race, age, education, etc. Since consensus is significantly related to length of marriage, consensus as operationalized here may reflect spouse selection during an earlier time period when religious homogeneity was more highly valued than it is today. A more valid measure of consensus would tap agreement on a wider range of basic norms, beliefs, attitudes, and values. Constructing such a measure is likely to be difficult, however, if consensus means something different at different stages of the marital career.

While generally women have been regarded to need greater closeness and intimacy (Wright, 1972), to be more impacted by socioemotional factors (Hawkins, 1968), and to have a greater emotional investment in marriage (Bell, 1972); our findings suggest that some of these assumptions

may not be accurate, or no longer apply, if indeed, they ever did. At the very least, the present findings suggest that interaction in marriage is as important to the health and well-being of husbands as it is to wives.

The Midtown Manhattan Study found few differences in the mental health of married men and women and explained that the strains of career and work may be as disturbing to a man as the strains of marriage are disturbing to a woman. The Midtown researchers were, therefore, unwilling to "assume as yet that the married state has in itself like mental health consequences for the two sex groups" (Srole et al., 1978:215).

Major differences between the Midtown Study and the present research are that specific dimensions of the marital relationship have been the focus of the present study and these have been examined in relationship to other health measures in addition to mental health status. The purpose here has also not been to examine the marriage relationship as a source of stress in comparison to other potential environmental stressors such as career and work. Rather, in accord with the theoretical model presented earlier, the focus here is on the mechanisms by which marriage serves as a buffer against stressors regardless of their origin. It is in this respect that marital interaction in the present research appears to be as important to husbands as to wives.

Perhaps the meaning attached to marriage by both husbands and wives may be changing over time. The past decade has witnessed a great deal of shifting in the distribution of power and the allocation of roles within and outside of marriage (e.g., working wives) which may in part account for the greater equality between husbands and wives in terms of the effect of the marital relationship on health.

If the marital relationship really does have more significance for the emotional health of husbands, it may be because husbands have fewer close friends and less intimate relationships outside of marriage than their wives. They may therefore depend more on marriage for the satisfaction of their emotional needs. If marriage fails to satisfy these needs, there is greater risk of experiencing lower levels of health and well-being.

A question related to that of whose health is affected more by the marital relationship is: "Whose perceptions of the relationship are more likely to influence one's health--one's own or those of one's partner?" It has been shown that for certain emotion-sensitive health measures (self-esteem, trauma, and emotion-related disease) it is the perception of one's spouse which partially accounts for one's own health.¹⁷ Why does this occur?

¹⁷This "crossover" effect, however, is not true for the measure of mental health status.

Since American culture places such a high value on "success" in marriage, married persons are not only motivated to make their own contribution to a "successful" marriage but are, in a sense, obligated to do so. Each partner's perceptions regarding the "success" of the marital relationship are more or less directly communicated to the other. If a married person becomes aware of the fact that his or her spouse perceives marital interaction as negative or as less positive than desired, he or she may feel a sense of failure or inadequacy which, in turn, affects his or her self-esteem and emotional health. One's own perception of marital quality is certainly important, but to evaluate "success" objectively one needs the kind of significant external criterion provided by a spouse. It is easy for one to feel a sense of inadequacy even though one's spouse perceives marital quality to be good, but it is difficult to maintain a good feeling about one's marriage when one's spouse perceives the relationship to be less than desirable.

If there is interest in studying the relative contributions of husband and wife to one another's health and well-being, it is important to collect data from both husbands and wives as has been done here. The merits of this type of data collection are well-documented (Spanier and Lewis, 1980; Scanzoni, 1970; Feldman, 1964). On the other hand, if one's purpose is to determine the relative

importance of various dimensions of the marital relationship in explaining health, it has been demonstrated that the results obtained are essentially the same if one interviews only one rather than both of the marriage partners.

Age for husbands and childhood health for wives are the factors external to the marriage relationship which are the most important determinants of health. Age is the primary or secondary factor in explaining health for husbands defined by utilization of medical services for each of the four disease classes. As men age, they are at greater risk of health impairment. Illness for wives, on the other hand, may to a greater degree than for husbands represent a behavior pattern learned early in life which tends to persist in adulthood. Remarkably, childhood health appears as a factor in the explanation of all seven measures of health and well-being for wives in this study (compared to only two measures, mental and general health status, for husbands).

SUGGESTIONS FOR FUTURE RESEARCH

The findings of this study encourage further research in an attempt to better understand marriage-health linkages. Suggestions for continuing the work reported here include both the addition of new variables and the refinement of some of those variables which have been utilized.

On one level, as was already noted, a wider range of norms, beliefs, attitudes, and values should be used in constructing a consensus measure. But, if consensus for many couples actually means "agreeing to disagree", this would represent a type of consensus on an entirely different level. At this level it would be possible for a husband and wife to hold different values (e.g., one a Republican and the other a Democrat) and still be in "consensus" regarding the acceptability of the differences. It would be a challenge to design a measure that would take this type of consensus into account.

Other improvements might include subdividing marital activities into "joint" and "parallel" rather than into companionship and cooperation; using separate social status measures (education, occupation, and perceived social class) for husbands and wives rather than using one measure for the household, i.e., the male head (Hornung, 1981; Langner and Michael, 1963); and studying the effect of marriage on specific diseases within some of the disease classes which have been utilized.

In addition to improving upon the measures used in this study, other elements of marriage might be taken into account to refine and extend the present findings. For example, does the distribution of power or the allocation of roles within marriage enhance or diminish the importance of the marital interaction variables we have selected to

explain health? Evidence from other studies indicates the desirability of pursuing this question (Pratt, 1976).

While the wife's employment status has been unrelated to marital satisfaction in previous studies (Blood and Wolfe, 1960; Orden and Bradburn, 1974), it should be considered in relationship to the association shown here between marital interaction and health.

Although the number of years a couple has been married is an indirect indicator of stage in the family life cycle, such factors as family size and the number of children and their ages need to be more explicitly taken into account. The presence of children has a great deal of effect, often negative according to many studies (Scheuch, 1960; Spanier and Lewis, 1980; Burke and Weir, 1977; Feldman, 1964; Luckey, 1966), on the quality of interaction between a husband and wife. Does one's relationship with one's children account for much of the effect on one's health and well-being which has been attributed here to one's relationship with one's spouse?

Most of the family literature in sociology, as is true of this study, tends to ignore negative socioemotional interaction and its consequences (Hawkins, 1968). In one study, for example, measures of hostility and tension accounted for more variance in marital satisfaction than companionship (Barnett and Nietzel, 1979). Negative socioemotional experiences would seem to be particularly useful

in studies using emotionally sensitive health and well-being measures. Gurin and his colleagues (1960) remind us that "happiness" in marriage needs to be considered along with feelings of "inadequacy" and an awareness of "problems" in order to achieve a more complete understanding of the marital relationship.

In order to have greater assurance that the marriage relationship does affect health independent of health and well-being prior to marriage, it would be desirable to use additional direct or indirect measures of health and well-being which antedate marriage. One of these might be the emotional environment of one's home of origin (Gurin et al., 1960; Goetting, 1981).

A final suggestion for future research would be to mention the benefit of a followup survey of this study population. Although costly, it would provide a "one-group pretest-posttest experimental design" (Campbell and Stanley, 1963). Such a design would offer valuable opportunities to observe changes in marital status and marital perceptions in relationship to changes in health status over time.

To the extent that marital interaction affects health, the identification of those factors which contribute to higher levels of marital interaction has practical implications for the promotion of health, if spouses can be taught to incorporate these factors into their marriage.

Intervention to improve health status, especially for wives, might involve educational efforts to help couples become more aware of how their health behavior is conditioned by social factors (e.g., childhood socialization) and is therefore at least somewhat amenable to change.

At least one health insurance carrier has used measures of cohesion and companionship in designing a "Wellness Kit" for its customers (Aid Association for Lutherans, 1979). The kit provides a scale for family members to rate their life together in terms of these measures and others. Then, on the basis of the results, the family is encouraged, by means of a planning guide also included in the kit, to consider behavioral changes which will result in greater family togetherness and ultimately, it is hoped, improved health and well-being.

Given the ubiquity of stressors in contemporary life and an increasing interest in behaviors which preserve health, studies such as this one should provide additional motivation for strengthening the social support inherent in the marital bond.

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APPENDIX

Study # _____

MEDICAL CARE UTILIZATION STUDY—FORM A MEDICAL SERVICE RECORD FORM

Stamp #(74-78) _____

<p style="text-align: center;">PATIENT'S NAME _____</p> <p>(1-3) <u>101</u> (4-9) _____ Card Code CHART NO.</p> <p>(10-19) _____ H.P.I.D. _____</p> <p>1. (20-25) DATE OF SERVICE</p> <p style="text-align: center;">Month Day Year</p> <p>2. (26) DAY'S SERVICE NO. (27) MORB. NO.</p> <p style="text-align: center;">1 2 3 4 5 0 1 <input checked="" type="checkbox"/></p> <p>3. (28) DAY OF SERVICE</p> <p style="text-align: center;">S M T W Th F S 7 1 2 3 4 5 6</p> <p>4. (29) PLACE OF SERVICE</p> <p>1 <input type="checkbox"/> clinic 6 <input type="checkbox"/> Kaiser inpatient 2 <input type="checkbox"/> home 8 <input type="checkbox"/> other hospital (specify) _____ 3 <input type="checkbox"/> nursing home 4 <input type="checkbox"/> emerg. room 5 <input type="checkbox"/> phone/letter 9 <input type="checkbox"/> outside M.D. 0 <input type="checkbox"/> other (specify) _____</p> <p>5. (30) TYPE OF SERVICE</p> <p>1 <input type="checkbox"/> physician 6 <input type="checkbox"/> optometry 2 <input type="checkbox"/> physical therapy 7 <input type="checkbox"/> audiometry 3 <input type="checkbox"/> nurse 8 <input type="checkbox"/> other (specify) _____ 4 <input type="checkbox"/> mental health 5 <input type="checkbox"/> social worker 9 <input type="checkbox"/> inapplicable</p> <p>6. (31) TIME OF SERVICE</p> <p>1 <input type="checkbox"/> during clinic hours 9 <input type="checkbox"/> inapplicable not during 0 <input type="checkbox"/> not ascert. = <input type="checkbox"/> clinic hours _____ (time)</p> <p>7. (32) TYPE OF APPOINTMENT</p> <p>1 <input type="checkbox"/> regular scheduled 4 <input type="checkbox"/> phone/letter 2 <input type="checkbox"/> walk-in 5 <input type="checkbox"/> other (specify) _____ 3 <input type="checkbox"/> emergency room 7 <input type="checkbox"/> walk-in/after clinic hours</p> <p>8. (33-35) PHYSICIAN OR OTHER PROFESSIONAL RENDERING OR ORDERING SERVICE</p> <p style="text-align: right;">999 <input type="checkbox"/> inapplicable</p> <p>9. (36) STATUS OF PHYSICIAN</p> <p>1 <input type="checkbox"/> regular attending 5 <input type="checkbox"/> other (specify) _____ 2 <input type="checkbox"/> temporary 9 <input type="checkbox"/> inapplicable 3 <input type="checkbox"/> consultant--referred by: _____</p> <p>Clerk: _____ 9-11788 Revised 6/75</p>	<p style="text-align: center;">11. PRESENTING MORBIDITY</p> <p>A. MORBIDITY NAME _____ ICDA NO. _____ (Card 01/37-40) <input type="checkbox"/> 9999 inapp.</p> <p>B. STATUS OF DIAGNOSIS (41) 1 <input type="checkbox"/> unknown 3 <input type="checkbox"/> established 2 <input type="checkbox"/> tentative 9 <input type="checkbox"/> inapplicable</p> <p>C. EPISODE (46) 1 <input type="checkbox"/> initial visit 3 <input type="checkbox"/> preventive 2 <input type="checkbox"/> continuing 9 <input type="checkbox"/> inapplicable</p> <p>(47-54) _____ Serv-Morb No. _____ Stamp Series (55-56) <input type="checkbox"/> 06 <input type="checkbox"/> 07 <input type="checkbox"/> 08 <input type="checkbox"/> 09 (57) Cht. _____</p> <p>CLinic or Hosp (53) BK Dv Vc B/W Bv FS SS Is NA 1 2 3 4 5 6 7 8 9</p> <p>D. MAJOR PRESENTING SYMPTOMS (59-62) _____ (63-66) _____ (no 2nd sym. <input type="checkbox"/> 0000) 8's <input type="checkbox"/> not ascertained 9's <input type="checkbox"/> inapplicable 0's <input type="checkbox"/> no symptoms</p> <p>E. DURATION OF MAJOR PRESENTING SYMPTOMS _____ days (67-69) . 666 <input type="checkbox"/> vague, less than a year 000 <input type="checkbox"/> less than 1 day 998 <input type="checkbox"/> not ascertained 777 <input type="checkbox"/> greater than a year 999 <input type="checkbox"/> inapplicable 888 <input type="checkbox"/> since birth</p> <p style="text-align: right;">(70) Assoc. Morb. for Hosp. Adms. Referred by: _____ (71-73) stamp#(74-78)</p> <p style="text-align: center;">Card Code (1-3) <u>102</u> Duplicate Cols 4-28</p> <p>F. PROCEDURES RENDERED</p> <p style="text-align: center;">Punch 9's in blank fields</p> <p>1. _____ 2. _____ 3. _____ (Cd.02/29-32) (33-36) (37-40)</p> <p>4. _____ 5. _____ 6. _____ (41-44) (45-48) (49-52)</p> <p>G. TYPE OF SCHEDULED RETURN VISIT</p> <p>(53) RETURN VISIT: 1 <input type="checkbox"/> Scheduled..... 54-76 SEE BELOW 8 <input type="checkbox"/> Not scheduled... 54-76 punch 8's 9 <input type="checkbox"/> Inapplicable... 54-76 punch 9's</p> <p>(54) <input type="checkbox"/> this physician _____ days (55-57) 000 <input type="checkbox"/> NA 777 <input type="checkbox"/> today</p> <p>(58) <input type="checkbox"/> attending physician _____ days (59-61) 000 <input type="checkbox"/> NA 777 <input type="checkbox"/> today</p> <p>(62) <input type="checkbox"/> consultant (70) <input type="checkbox"/> other (63) <input type="checkbox"/> laboratory (71) <input type="checkbox"/> soc. worker (64) <input type="checkbox"/> radiology (72) <input type="checkbox"/> telephone (65) <input type="checkbox"/> pathology (73) <input type="checkbox"/> hospital (66) <input type="checkbox"/> mental health (74-76) _____ (67) <input type="checkbox"/> physical therapy days _____ (68) <input type="checkbox"/> nurse 000 <input type="checkbox"/> NA (69) <input type="checkbox"/> optometry 777 <input type="checkbox"/> today</p> <p>Punch 1 for each checked box, unless otherwise specified</p> <p>Punch 8's for each blank field or box</p> <p>Tech: _____ (77) No. of Associated Morbidities (78) _____ Loc. of Pt. when Referred to H.II.</p>
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SEE REVERSE SIDE FOR ASSOC. MORBS. & DRUGS

12. Associated Morbidity

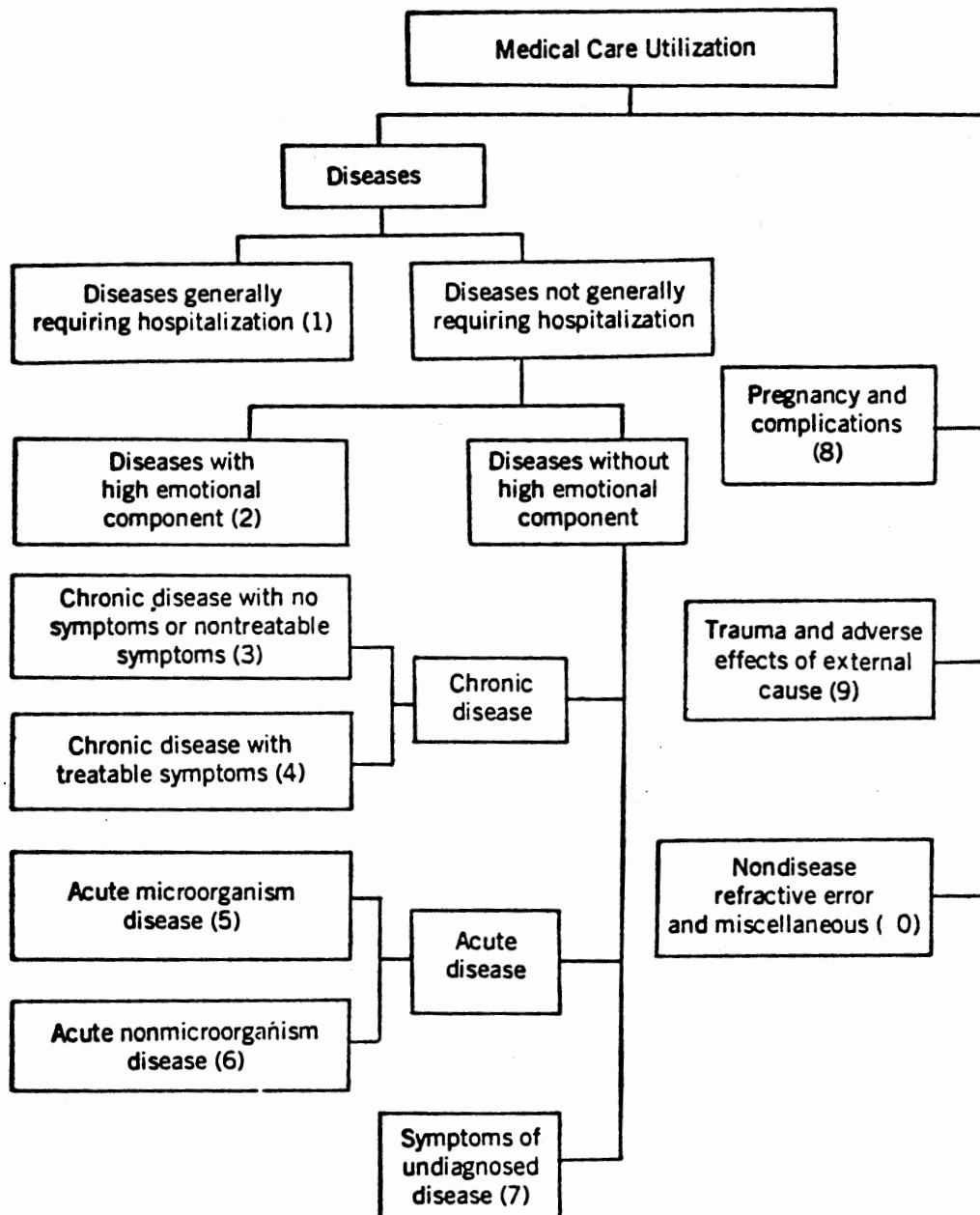
13. Associated Morbidity

		11 Card Code (1-3) 2 Morb. No. (27)	121 Card Code (1-3) 3 Morb. No. (27)	
A. MORB. NAME				
ICDA NO.	(Card 11/37-40) <input type="checkbox"/> 9999 inapp.		(Card 21/37-40) <input type="checkbox"/> 9999 inapp.	
B. STATUS OF DIAGNOSIS	(41)	1 <input type="checkbox"/> unknown 3 <input type="checkbox"/> established 2 <input type="checkbox"/> tentative 9 <input type="checkbox"/> inapplicable	(41)	1 <input type="checkbox"/> unknown 3 <input type="checkbox"/> established 2 <input type="checkbox"/> tentative 9 <input type="checkbox"/> inapplicable
C. EPISODE	(46)	1 <input type="checkbox"/> initial visit 3 <input type="checkbox"/> preventive 2 <input type="checkbox"/> continuing 9 <input type="checkbox"/> inapplicable	(46)	1 <input type="checkbox"/> initial visit 3 <input type="checkbox"/> preventive 2 <input type="checkbox"/> continuing 9 <input type="checkbox"/> inapplicable
		Punch 9's if blank → (47-54) _____ Service-Morb. No.		Punch 9's if blank → (47-54) _____ Service-Morb. No.
D. MAJOR PRESENTING SYMPTOMS	(59-62) _____ (63-66) _____	(63-66) (no 2nd sym <input type="checkbox"/> 0000) 8's <input type="checkbox"/> not ascertained 9's <input type="checkbox"/> inapplicable 0's <input type="checkbox"/> no symptoms	(59-62) _____ (63-66) _____	(63-66) (no 2nd sym <input type="checkbox"/> 0000) 8's <input type="checkbox"/> not ascertained 9's <input type="checkbox"/> inapplicable 0's <input type="checkbox"/> no symptoms
E. DURATION OF MAJOR PRESENTING SYMPTOMS	_____ days (67-69) :	666 <input type="checkbox"/> vague, less than a year 000 <input type="checkbox"/> less than 1 day 777 <input type="checkbox"/> greater than a year 998 <input type="checkbox"/> not ascertained 999 <input type="checkbox"/> inapplicable	_____ days (67-69) :	666 <input type="checkbox"/> vague, less than a year 000 <input type="checkbox"/> less than 1 day 777 <input type="checkbox"/> greater than a year 998 <input type="checkbox"/> not ascertained 999 <input type="checkbox"/> inapplicable
F. PROCEDURES RENDERED	<u>112 (1-3)</u> 1. _____ 2. _____	(Cd.12/29-32) (33-36)	<u>122 (1-3)</u> 1. _____ 2. _____	(Cd.22/29-32) (33-36)
	Others (37-52) _____		Others (37-52) _____	
G. TYPE OF SCHEDULED RETURN VISIT	(53) RETURN VISIT: 1 <input type="checkbox"/> Scheduled..... <u>54-76 SEE BELOW</u> 8 <input type="checkbox"/> Not scheduled..... <u>54-76 punch 8's</u> 9 <input type="checkbox"/> Inapplicable..... <u>54-76 punch 9's</u>		(53) RETURN VISIT: 1 <input type="checkbox"/> Scheduled..... <u>54-76 SEE BELOW</u> 8 <input type="checkbox"/> Not scheduled..... <u>54-76 punch 8's</u> 9 <input type="checkbox"/> Inapplicable..... <u>54-76 punch 9's</u>	
	(54) <input type="checkbox"/> this physician _____ days (55-57) 000 <input type="checkbox"/> NA 777 <input type="checkbox"/> today		(54) <input type="checkbox"/> this physician _____ days (55-57) 000 <input type="checkbox"/> NA 777 <input type="checkbox"/> today	
	(58) <input type="checkbox"/> attending physician _____ days (59-61) 000 <input type="checkbox"/> NA 777 <input type="checkbox"/> today		(58) <input type="checkbox"/> attending physician _____ days (59-61) 000 <input type="checkbox"/> NA 777 <input type="checkbox"/> today	
	(62) <input type="checkbox"/> consultant (70) <input type="checkbox"/> other	(62) <input type="checkbox"/> consultant (70) <input type="checkbox"/> other	(62) <input type="checkbox"/> consultant (70) <input type="checkbox"/> other	
	(63) <input type="checkbox"/> laboratory (71) <input type="checkbox"/> social worker	(63) <input type="checkbox"/> laboratory (71) <input type="checkbox"/> social worker	(63) <input type="checkbox"/> laboratory (71) <input type="checkbox"/> social worker	
	(64) <input type="checkbox"/> radiology (72) <input type="checkbox"/> telephone	(64) <input type="checkbox"/> radiology (72) <input type="checkbox"/> telephone	(64) <input type="checkbox"/> radiology (72) <input type="checkbox"/> telephone	
	(65) <input type="checkbox"/> pathology (73) <input type="checkbox"/> hospital	(65) <input type="checkbox"/> pathology (73) <input type="checkbox"/> hospital	(65) <input type="checkbox"/> pathology (73) <input type="checkbox"/> hospital	
	(66) <input type="checkbox"/> mental health (74-76) _____	(66) <input type="checkbox"/> mental health (74-76) _____	(66) <input type="checkbox"/> mental health (74-76) _____	
	(67) <input type="checkbox"/> physical therapy days _____	(67) <input type="checkbox"/> physical therapy days _____	(67) <input type="checkbox"/> physical therapy days _____	
	(68) <input type="checkbox"/> nurse 000 <input type="checkbox"/> NA	(68) <input type="checkbox"/> nurse 000 <input type="checkbox"/> NA	(68) <input type="checkbox"/> nurse 000 <input type="checkbox"/> NA	
	(69) <input type="checkbox"/> optometry 777 <input type="checkbox"/> today	(69) <input type="checkbox"/> optometry 777 <input type="checkbox"/> today	(69) <input type="checkbox"/> optometry 777 <input type="checkbox"/> today	

104 (1-3) dup. cols. 4-26, 28 DRUGS ORDERED IMMUNIZATIONS NONE ORDERED INAPPLICABLE

MORB	DRUG NAME, STR, DOSE FORM, QTY, REFILL	DR.	Inst	Drug	RA	Intvl.	Length	Time	#RF	St.	Series & Stamp #
(27)	(INSTRUCTIONS (One drug per line))	NO. (29-31)	(32)	(33-37)	(38)	(39-41)	(42-43)	(44)	(45)	(46-52)	

FROM COLS. 55-56 & 74-78 of CARD 01



Basic structure of the Kaiser Clinical-Behavioral Classification System.