

AN ABSTRACT OF THE THESIS OF

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Kanter (1977) conceptualized five dimensions of the interdependence between work and family: occupational subculture, job absorption, time and timing, rewards and resources, and the emotional climate of work. Each of these dimensions affects the functioning and satisfaction of families and marriages. This research examined how four of these dimensions (occupational subculture, job absorption, time and timing, and the emotional climate) influenced the marital satisfaction of physicians and their spouses. It was hypothesized that physicians and their spouses' marital satisfaction would be affected by each of the four dimensions, as well as the following physicians' work-related activities: number of hours

physicians work per week, physicians' working environment, the physician's medical specialty, and the period of time that physicians' medical practice is generally the most successful (age 35-45). Included in this study was the development of a scale to assess the dimensions of work/family overlap.

The results indicated that of the four work/family dimensions, work satisfaction was the only predictor of physicians' marital satisfaction. For physicians' spouses, physicians' work satisfaction and physicians' work involvement were predictors of spouses' marital satisfaction. Within the categories of work-related demographics, age was the only variable impacting the marital satisfaction of physicians and spouses. Physicians experienced the lowest marital satisfaction during ages 35-45. Spouses experienced the lowest level of marital satisfaction during years 35-65.

A combined model of the work/family dimensions and work/family demographics indicated that physicians and spouses had different predictor variables of marital satisfaction, depending on work-related activities.

Discussion focused on the differences between physicians and their spouses, the limitations of the study, suggestions for future research, and implications for intervention.

The Impact of Perceptions of Work/Family Overlap
and Objective Work/Family Characteristics
on Marital Satisfaction of Physicians and Their Spouses

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It is my hope that through this research, a positive contribution will be made in the area of work and the family, and that medical marriages may be enriched.

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THE IMPACT OF PERCEPTIONS OF WORK/FAMILY OVERLAP AND OBJECTIVE WORK/FAMILY CHARACTERISTICS ON MARITAL SATISFACTION OF PHYSICIANS AND THEIR SPOUSES

I. INTRODUCTION

Work and Family Overlap

Beginning with Kanter's (1977) conceptualization of the interdependence between work and family roles, researchers have produced volumes of literature attempting to explain this dynamic (Pittman and Orthner, 1988). Researchers have looked at a variety of factors that affect work-family dynamics. These factors include men's work and families (Aldous, Osmond, and Hicks, 1979; Barling, 1986), women's work and families (Arber, Gilbert, and Dale, 1985; Cianni and Weitz, 1986; Davis and Dawson, 1985; Piotrkowski and Crits-Christoph, 1981; Smith, 1985; Suchet and Barling, 1986), and dual-career and dual-worker families (Aldous, 1982; Cheeseman, 1985; Cherpas, 1985; Kater, 1985; Poloma, Pendleton, and Garland, 1981; Rapoport and Rapoport, 1969; Yogev and Brett, 1985).

Researchers have also investigated the effects of specific occupations and careers on families. These studies have focused on corporate workers (Burden and Googins, 1987), the military (Hochschild, 1969; McCubbin, Patterson, and Lavee, 1983), administrators (Burke, Weir,

and DuWors, 1980), professionals such as lawyers and professors, managers, executives (Boss, McCubbin, and Lester, 1979; Kanter, 1977; Levinson, Price, Munden, Mandl, and Solly, 1962; Mortimer, 1980 Papanek, 1973; Seidenberg, 1973; Steiner, 1972; Wilensky, 1961), politicians, (Goldman, 1963), the clergy (Richmond, Rayburn and Rogers, 1985), homemakers (Gandotra, 1985; Koerin, 1985; Lortie-Lussier, Schwab, and DeKoninck, 1985), farmers (Light, Hertsgaard, Martin, 1985), and physicians (Bennett, 1964; Coombs, 1971; Elliot, 1979; Gerber, 1983).

In addition to analyzing the general effects of specific occupations on families, several studies analyzed the types of conflicts that result between the family and work. Studies of these conflicts have focused on variables such as role strain and role expectations (Burke, Weir, and DuWors, 1980; Greenhaus and Beutell, 1985; Jones and Butler, 1980; Katz and Piotrkowski, 1983; Keith and Schafer, 1980; Mortimer, 1980), time demands and flexibility (Clark, Nye, and Clark, 1978; Keith and Schafer, 1980; Mortimer, 1980; Staines and Pleck, 1983 & 1986; Voydanoff and Kelly, 1984; Voydanoff, 1988; Wolfe, 1960) job commitment (Orthner and Pittman, 1986; Pittman and Orthner, 1988), job absorption (Kanter, 1977; Papanek, 1973; Parker, 1967), and job rewards (Aldous, Osmond, and Hicks, 1979; Lewis and Spanier, 1979; Mawardi, 1979; Rice, McFarlin, Hunt, and Near, 1985).

Other issues researchers have analyzed that influenced conflict between work and the family were parenting issues (Alvarez, 1985; Easterbrooks and Goldberg, 1985; Hartman and Vinokur-Kaplan, 1985; Hirst, 1985; Otto, and Call, 1985; Parvathi, Rao, and Swaminathan, 1985; Sagi, 1985; Siegel, 1985), mental and physical health (McArthur, 1972; O'Neill, and Zeichner, 1985; Sekaran, 1985; Stein and Franks, 1985; Vaillant, Sobowale, Warren and McEachren, 1985; Woods, 1985), and developmental dynamics such as number of children, timing of peak career success, and ages of both spouses (Easterbrooks and Goldenberg, 1985; Evans, 1985; Goodman and Waters, 1985; Glick and Borus, 1984; Klein, 1985; Kotler, 1985; Miles, Krell, and Lin, 1975; Rollins and Feldman, 1970; Rose and Rosow, 1972; Usher and Fels, 1985)

Studies that have examined the impact of these variables on marital satisfaction conclude that the overlap of these work and family variables results in lower marital satisfaction (Burke, Weir, and DuWors, 1980; Keith and Schafer, 1980; Mortimer, 1980; Rice, McFarlin, Hunt, and Near, 1985; Staines and Pleck, 1983; Voydanoff and Kelly, 1984).

Work and Family Overlap Among Physicians and Their Spouses

Of particular interest in this proposed study is how these family and work variables affect physicians' marital satisfaction and physicians' spouses' marital satisfaction.

For example, drug and alcohol abuse is high among physicians and their wives (Duffy and Litin, 1967; Lewis, 1965; Modlin and Montes, 1964; Vaillant, Sobawale, and McArthur, 1972). Psychological problems occur at a higher rate among physicians' families than non-medical families. These problems include high suicide rates (DeSole, Aronson, and Singer, 1967), compulsivity, depression, and self-doubt (Gerber, 1983; Krakowski, 1982; Vaillant et al., 1972; and Vincent, 1969). Some researchers have suggested that the amount of time physicians are required to spend away from home contributes to lower marital satisfaction (Coombs, 1971; Elliot, 1979; Evans, 1965; Gerber, 1983; Lewis, 1965), and that this lower marital satisfaction results in higher divorce rates among the physicians than is found in other professions (Gerber, 1983; Ottenberg, 1974).

Gerber (1983) indicated that physicians' identities center exclusively around their occupations. At work, physicians are considered "heroes" or authority figures. At home, this status is lost, contributing to confusion, depression, and anger. According to Gerber, this "hero" identity exists not only in the physician's mind but is also an expectation of the communities served. Pressure is imposed by patients who expect their physicians to be omnipotent and to provide 24-hour service. This pressure interferes with and challenges the physicians' efforts to maintain separate work and family lives. Few professions

are affected by such controlling forces, which heightens the importance of studying physicians and their marital relationships.

These situations that physicians experience can impact both physicians' identity as well as the family environment. A number of studies analyzed different characteristics of physicians' jobs to see how these situations impact physicians and their families (Gabbard et al., 1987; Garvey and Tuason, 1979; Gerber, 1983; Mawardi, 1979; Rose and Rosow, 1972; Vaillant et al., 1972). Researchers also suggested that the result of physicians' work overlapping into their family life lowered both the physicians' marital satisfaction and their spouses' marital satisfaction (Gerber, 1983; and Mawardi, 1979). Gerber (1973) does not provide statistical information to back the conclusion, and Mawardi implies that differences in marital satisfaction are due to varying degrees of occupational support available in clinics and hospitals versus the support available to private practitioners. However, because Mawardi was looking at job satisfaction rather than marital satisfaction, Mawardi suggested that further research is needed before a sound conclusion can be made about how working environment affects physicians' marital satisfaction.

The literature also suggested that, in addition to the different types of support available among the working

environment of physicians, physicians' marital satisfaction can be influenced depending on the amount of hours physicians work, when and how much "on-call" hours they have, as well as the amount of direct patient care physicians provide (Coombs, 1971; Gabbard, 1985; Gabbard, et al., 1987; Krakowski, 1982; Ottenberg, 1974). The literature suggested that not marital satisfaction differed by the physicians' working environment and medical specialty (Coombs, 1971; Gabbard et al., 1987; Garvey and Tuason, 1979; Gerber, 1983; Krakowski, 1982; Rose and Rosow, 1972; Vaillant, et al., 1972). In particular, these studies suggested that physicians who deal directly with patient care, such as internists, psychiatrists, obstetricians, pediatricians, and surgeons have less marital satisfaction than those physicians who deal less directly with patient care, such as radiologists or anesthesiologists (Coombs, 1971; Gerber, 1983; Gabbard et al., 1987; Vaillant, et al., 1972; Rose and Rosow, 1972; Garvey and Tuason, 1979; and Krakowski, 1982).

These studies had a common weakness: sample size. The samples were too small to allow researchers to demonstrate statistically significant differences in marital satisfaction among medical specialties. However, the studies do suggest that possible differences exist and that the subject warrants further investigation.

The literature further suggested that the amount of

time physicians spend at work could differ depending on either the working environment or the medical specialty. This literature suggested that long hours affected both their own and their spouses' marital satisfaction (Elliot, 1979; Gabbard, Menninger, and Coyne, 1987; Ottenberg, 1974). Excepting the study by Gabbard et al., none of these studies controlled for the amount of hours worked; some of the studies looked at the possible reasons physicians work and not at the impact of the hours away from their families (Krakowski, 1982; Ottenberg, 1974).

The last focus of the present study is the physicians' career development and its effect on marital satisfaction. The literature on families concluded that during the childrearing years, marital satisfaction was lower than the years before or after raising children (Cole, 1984), and that men were generally more satisfied maritally than women (Kotler, 1985; Rollins and Feldman, 1970). Studies on physicians and their spouses suggest similar patterns, in that the highest rate of personal and marital problems comes at the height of the physician's career, between the ages of 35 and 45 years (Evans, 1965; Glick and Borus, 1984; Miles, Krell and Lin, 1975; Rose and Rosow, 1972). Only Glick and Borus' (1984) study looked specifically at marital dynamics during these peak career periods.

The major weakness of Glick and Borus' study was the sample used to draw conclusions. The sample consisted of 13

physicians and their wives, who currently were receiving counseling for marital problems. The conclusions drawn from this sample cannot be generalized to the population of physicians who are not receiving counseling.

Purpose of Study

The purpose of this study was to use Kanter's (1977) work/family dimensions of occupational subculture, job absorption, time and timing, and the emotional climate of work, as a theoretical framework to analyze differences in marital satisfaction between physicians and their spouses. Additionally, this study analyzed work-related variables of the amount of hours physicians work, their working environment, medical specialty, as well as the age of both physicians and their spouses. Specifically, two research questions were answered: 1) How are the various areas of work/family overlap articulated by Kanter (1977) related to the marital satisfaction of physicians and their spouses?; and 2) How does the demographic background of physicians and their spouses, particularly job characteristics of physicians, affect their marital satisfaction? Demographic variables found to influence marital satisfaction were also used in the analyses. These variables included gender, years married, income, and the number of children living at home.

II. LITERATURE REVIEW

Using Kanter's (1977) conceptualization of families and work as a framework, this literature review will show how physicians' occupations are related to their marriages. Kanter suggests five areas where work life can influence the interactions of family life. These areas are: 1) the occupational culture and world view, 2) the amount of job or work absorption, 3) the time and timing of a job, 4) the rewards and resources offered by a job, and 5) the emotional climate of the job. Each of these areas will be briefly explained and integrated with the literature on physicians and their families.

It should be noted that while there is an increasing number of female physicians, the literature on physicians has not analyzed the differences between male and female physicians due to the disproportionate number of male physicians. A section on female physicians will be included; however, the term "physician" throughout this review refers primarily to research on male physicians and their spouses.

Kanter's (1977) conceptualization of the interdependence between work and family roles was one of the first attempts to understand the impact of working environments on family life. Before Kanter's work, few studies hypothesized any connection between work and family. Of those studies that did, most concluded social

class and specific family variables had the largest impact on families. Kanter argued that for the middle class, who represent the majority of the working classes, it is not class that shapes family interactions, but the constraints of occupations. It is the impact of these occupations and their characteristics that influence behavior and lifestyle (Kanter, 1977). These major characteristics or work/family dimensions suggested by Kanter are the theoretical foundation for this study.

Occupational Cultures and World View

Kanter (1977) cited Hughes (1958) as the best definition of how work can influence families as socializers and teachers of values. Hughes indicated that "work provides a subculture and an identity that become part of the worker's personality; the culture, technique, etiquette, and skill of the profession appear as 'personality traits' in the individual". In other words the place or type of occupation will have an influence on how an individual feels, thinks, and acts in both the working environment or the family environment. For example, Kohn and Carroll's (1960) study concluded that blue-collar parents and white-collar parents differed in parenting styles, with blue-collar parents valuing obedience, and fathers being either directive or uninvolved as parents. White-collar parents valued self-direction and initiative in children, and fathers tended to be more

supportive of mothers and more involved parents (Kohn and Carroll, 1960).

Recently, Luster et al. (1989) tested Kohn's (Kohn and Carroll, 1960) hypothesis that middle-class parents would differ from working-class parents in parenting behaviors. Luster et al. expanded Kohn's hypothesis to include differences between working- and middle-class parents in "childrearing beliefs" that affected parenting behavior. Luster et al. used 65 mother infant dyads and indicated support of Kohn's hypothesis in that childrearing beliefs differed in middle- and working-class mothers. Specifically, the study concluded that working-class mothers valued conformity to rules and would make more restraints in the home than would middle-class mothers who valued self-direction. The middle-class mothers were more supportive of exploratory behaviors in their infants. The problem with this study was that entrepreneurial husbands and bureaucratic husbands were not interviewed; the basis for the mothers' world view was assumed to be the husbands' work. It would have been beneficial to interview both parents to see if these differences exist in "parents" or just "mothers" of entrepreneurial and bureaucratic families.

Another study showed differences between entrepreneurial parents' work and bureaucratic parents, with wives of entrepreneurial husbands placing more value

on a child's self-control and independence and bureaucratic mothers permitting more impulsive expression from their children and wanting their children to seek direction from others (Miller and Swanson, 1958).

Another cultural concept of work that affects family life is the issue of personality differences at work and home. Wives reported that husbands can view themselves one way at work and come home demanding or expecting their family to see them in the same way rather than as a husband or father, creating marital and family stress and readjustment (Kanter, 1977).

Rice, McFarlin, Hunt, and Near (1985) looked further into the concept of how personalities and working environment interact together. They theorized that marital satisfaction depends on "Person-Environment (P-E) Fit". They found that employees or individuals gravitated toward corporations that offered better fit between the individual and the working environment. Furstenberg (1974) explained the importance of the person-environment fit by concluding that economic security is a prerequisite to marital happiness, and yet that same security can create a separateness between family members.

Recognizing this dynamic, Voydanoff (1987) stated that, in an attempt to gather family support, some organizations are beginning to enhance the work environment by implementing corporate policies that govern relocation

and work demands so as to make the organization fit better with the characteristics and needs of the employee. The literature indicated that occupational cultural outlook can influence families from what children learn to value, and how well personalities and family lifestyles fit with working environments, to how occupations influence the personality of the worker.

Physicians' Cultural View

Taubman (1974) suggests that as a result of their working world, physicians seem to develop specific personality or psychological characteristics to cope with their lifestyles. For example, Gerber (1983) found individuals in the medical profession to be achievement oriented. Krakowski (1982) deemed them "compulsive personalities." Taubman (1974) suggested that due to extreme competition during medical training (from medical school admission through residency), the constant pressure to learn at an accelerated pace, and being expected to be above average in both academic performance and the practice of medicine, physicians' life experiences became restricted and narrow. Due to time spent in preparation for classes and interning, the physician's life focus is so restricted that Taubman suggested physicians develop a "relative retardation in social experience."

Gerber (1983) concluded that the expectations of the medical profession, along with society's expectations,

helped foster a general attitude of "godliness" or "specialness" within each physician. While this cultural influence of specialness may have psychological rewards, it has significant costs as well. Gerber offered five examples of "the cost of specialness": 1) Self-doubt. This is cultivated by having expectations from self, colleagues, and teachers that are too high. The young medical trainee experiences feelings of never being able to measure up, which results in depression, isolation, and loneliness. 2) Fear of failure. This is the natural consequence of an occupation in which "there is always more to be learned, where risk is infinite, and where patient care responsibility is great" (p. 63). 3) The need to be loved. Rhoades (1977) substantiated this by indicating that one of the major reasons for physicians overworking is their need to be loved by everyone. 4) Dysfunctional reactions to stress, including behaviors such as drug and alcohol abuse and suicide attempts. 5) Development of a cynical attitude. Gerber indicated that physicians can become callous and cynical as a result of "patient demands at all hours, extent of illness and treatment knowledge still unknown, and the disappointment over the education process and role models" (p. 63). Vaillant et al. (1972) concluded that physicians in their 30-year study had traits of dependency, pessimism, passivity, and self-doubt, and that these traits coincided with physicians who had chemical

addictions.

Combined with the above traits, others (Gerber, 1983; and Vincent, 1969) found that it is difficult for physicians to admit their own limitations and inabilities, whether these limits are their own insecurities, abilities in patient care, or personal needs for support and caring.

Coombs (1971) found that physicians had a tendency to resist seeking and accepting help from other professionals. Because many patients view physicians as almost superhuman, physicians begin to see themselves as infallible, incapable of mistakes. This creates a conflict resulting in resistance to seek help from colleagues or other helping professions even when physicians recognize a problem within themselves or their families.

Duffy and Litin (1967) indicated that physicians who were admitted to the psychiatric unit of the Mayo Clinic were resistant to the point of emotional collapse, and more than half had alcohol and drug addiction. These physicians felt overwhelmed by the demands of family and society, developed patterns of working long hours, had no outside work interests, and had no time for family vacations. The physicians indicated that these work patterns were developed as a result of attempting to avoid the painful realities of their personal lives. Most distressing were feelings that a physician must be all things to all people, including patients, colleagues, wives, children, and

community. The weakness of this study was that these physicians were clinical cases and not necessarily representative of physicians who are not in the clinical population.

Gerber and others (Bennett, 1964; Coombs, 1971; Vincent, 1969) have indicated that patterns of depression, drug and alcohol use, and marital instability begin developing with the stress that results from competition, pressure, study time, and lack of family time during medical school. DeSole et al. (1967) found that depression occurred during physicians' peak career periods when role strain was greatest. DeSole et al. also (1967) found that the rate of suicide was higher among male physicians than non-physicians, and that among physicians, psychiatrists have the highest suicide rate. Miles, Krell, and Lin (1975) concluded that "medical practice itself is not the villain, rather it may be that for some physicians the aspiration to be a doctor is part and parcel of the same personality traits which led him to make an unsatisfactory marriage" (p. 486-487).

One of the problems that researchers have when studying the cultural view of physicians and their spouses is that the societal view of the physician's marriage may not be an accurate perception. In a review of the literature, Coombs (1971) criticized studies of medical marriages due to social desirability concerns. Physicians

and their spouses feel pressure to maintain a good public image and may have a tendency to report what is socially appropriate, perhaps even staying in unsatisfactory marriages in order to maintain their public images.

The cultural view of the physicians' work world impacts the physician in such a way that the physicians' view of themselves can be one of omnipotence, compulsion, and "specialness", resulting in personal fears and denial of personal and family problems. These personality characteristics can also be associated with drugs and alcohol, suicidal tendencies, depression, and unsatisfying marriages. The literature also suggested that differences in these qualities exist among medical specialties, between physicians who practice direct or indirect patient care, that there is a critical time period when physicians are more susceptible to these problems, and the long hours physicians work contribute to these problems. Although the studies do suggest these patterns, the weaknesses associated with the studies (such as lack of randomization, smallness of the sample size, and samples isolated to clinical cases) indicate that further research is needed before sound conclusions can be made.

Work Absorption

Work absorption is the extent that work draws in and demands performance from not only the worker but other family members as well (Kanter, 1977). More specifically,

Kanter defined work absorption as:

"occupational pursuits that not only demand the maximum commitment of the worker and define the context for family life, but also implicate other family members and command their direct participation in the work system in either its formal or informal aspects" (1977, p. 26).

Along with these formal and informal aspects are the qualitative and quantitative aspects of occupational absorption. Qualitative refers to mental or emotional absorption, and quantitative refers to "temporal absorption, where there is too much to do to confine to work time" (p. 30). Work absorption, then, "creates pressures and standards of family members other than the officially employed workers, and the efforts and performances of those others that enter into the functioning of the work system" (Kanter, 1977).

Certain occupational demands of time and energy are so great that they can negatively influence the personal identities of not only the employed person, but family members as well. These demands exceed the normal work day and overlap into both the leisure and the private lives of the employed.

At times, occupational demands can give family members job-related activities that become norms and coincide with their role expectations (Kanter, 1977). An example is the non-employed spouse who acts as personal secretary for the employed spouse after normal working hours. Kanter cited Papanek (1973) as having referred to jobs with high

absorption as a "two-person single career". Papanek suggested that in some cases, the husband's occupation is so involving that the wife actually has an "unpaid career".

A few studies seem to have approached this concept of the two-person single career by addressing the amount of commitment or support from the non-employed spouse for the occupation of the employed spouse. These studies, like the studies on physicians, looked primarily at employed husbands with non-employed wives, and concluded that when support from the wife is high, the occupation has a positive influence on the family (Mortimer, 1980; Papanek, 1973; Pittman and Orthner, 1988; Pleck, 1985). However, Clark, Nye, and Gecas (1978) concluded that marital satisfaction is not affected by husbands' job involvement.

To assist in explaining the range in the varying degrees of job absorption, Kanter adapted Parker's (1967) schema (see Figure 1) showing family members who view themselves as extensions of the occupation, those who are neutral, and those who oppose occupational absorption.

Examples that Kanter (1977) cited as absorptive occupations were executive positions, high status political positions, military positions, foreign service office, farm ownership, small restaurant ownership, retail establishments, Peace Corps volunteers, teaching and police work. One occupation that Kanter did not refer to as

Figure 1

Three kinds of relationships between work and family, based on degree of husband's occupational absorption*

RELATIONSHIP BETWEEN ARENAS:			
	Work-Home Extension (positive relationship)	Minimal Contact (neutral relationship)	Work-Home Opposition & Competition (negative relationship)
HUSBAND'S OCCUPATION	Farming, small shop or business, some professional or craft work	Technical, routine, bureaucratic, clerical, low- and mid-level managerial	Mining, fishing, low-skill factory work
OCCUPATIONAL CHARACTERISTICS	Home and work locales partly co-extensive	low visibility of occupation to family	psycho- logically or physically exhausting, damaging work
HUSBAND'S FAMILY ROLE IN RELATION TO OCCUPATIONAL ROLE	Continuous with work	Alternative to work	Recuperation from work
WIFE'S ROLE IN RELATION TO HUSBAND'S OCCUPATION	Collaborative	Supportive	Peripheral

*Adapted from Parker, 1967: p. 49.

having a high level of job absorption was physicians. There is literature dealing with physicians and their families which does not not address job absorption directly. This review of the literature will show that physicians may have high levels of job absorption, which could affect the dynamics of physicians' marriages.

Physicians' Work Absorption

From the onset of training to retirement, physicians become indoctrinated to the concept that the patient, above all else, comes first. In the words of a department chair at one of the leading medical training programs, "medicine is our way of life; everything else is and has to be secondary" (Gerber, 1983). This dynamic, placing the occupation as first priority, is a classic example of work absorption. Research on physicians and their spouses seems to address the informal aspects of absorption, the physicians' expectations that their spouses fill a supportive role and find their identities within the status and occupation of the physician (Evans, 1965; Gerber, 1983; Zemon-Gass and Nichols, 1975).

The cost of such an absorptive commitment, according to Zemon-Gass (1975), is that work-engrossed physicians could lose touch with those people who most naturally could provide a sense of intimacy, generativity, and integrity (family).

Coombs (1971) showed the irony of the physician's work

and family dilemma:

"It is ironic that any person in training to become a health practitioner should jeopardize his [sic] own marital health in the process...Even the most optimistic physicians, however, point out that the medical man [woman] is unusually prone to an unhealthy family situation... Although counseling services are usually provided when medical performance is adversely affected by marital difficulties, it is rarely given when the situation is reversed" (p. 95).

As a result of absorption, physicians and their spouses may develop unique patterns of coping with each other, often resulting in an unsatisfying marriage.

Due to the absorptive nature of the physician's occupation, the physician's spouse must learn to adjust plans to the schedules, work needs, and pressures of the physician. As a result of the physician's commitment of time and energy to the profession, little time is available for husband and wife to resolve personal and marital issues or to cultivate a relationship that can grow and deepen (Gerber, 1983).

Some studies (Evans, 1965; Shortt, 1979) indicated that the dynamics mentioned above result in compulsive "workaholic" physicians and dependent spouses with inordinate and unsatisfied needs for affection and nurturing.

Coombs (1971) concluded that the results of these types of absorptive behaviors (being away from the family, committing so much energy to work, etc.) are encountered after medical training. Coombs indicated that the first

problem results from the structural strains of the doctor-spouse relationship. This strain is caused by the physician's work role overlapping the physician's family role. As a result, physicians often developed compulsive work habits, which assists them in coping with the anxieties of keeping up professionally, but which render them "absent in spirit" when at home.

Coombs (1971) also reported that another structural strain is the intellectual and social difference between the physician and spouse. According to Coombs, when physicians marry, both physicians and their spouses are roughly evenly matched intellectually and socially. But as physicians study and acquire personal and intellectual growth, they surpass their spouses in those areas. One of the psychiatrists Coombs interviewed gave the analogy of "two caterpillars married when they were in college--one of them turned into a butterfly, but the other one remained a caterpillar" (p. 152). As the two separate intellectually and socially physicians often will escape the marriage by becoming even more absorbed in work. This dilemma may be changing with the increase of women into the work force, but as yet this has not been studied in reference to physicians and their spouses. The last area of conflict between work and family life in Coombs' (1971) study that addresses the absorptiveness of physician's work was physicians' expectations that their families should adapt

to their occupational demands.

In summary, the nature of absorption within physicians' careers impacts physicians and their families by physicians placing patients before family, expecting family members to adjust their lifestyles to their work demands, developing compulsive work habits, and developing intellectual and social differences between themselves and their spouses.

The occurrence of these dynamics within the medical marriage raises questions such as how does the marriage cope with these dynamics, do all doctors develop working styles that result in these dynamics, and do these dynamics last throughout the entire working career of physicians? These questions will be an underlining theme as the literature review continues to explore the issues surrounding both Kanter's (1977) concepts of work and family issues and how those concepts concern physicians and their spouses.

Time and Timing

Following Kanter's (1977) conceptualization of job absorption is the suggestion that the family can be affected by an aspect of work called "time and timing". This refers to "the amount of time demanded by occupations and the timing of occupational events, which are among the most obvious and important ways occupational life affects family life" (Kanter, 1977, p. 31). A number of studies

found direct relationships between the amount of hours a person works, the time of day a person works, and the amount of family conflict and strain that result (Burke, Weir, and DuWors, 1980; Keith and Schafer, 1980; Mortimer, 1980; Staines and Pleck, 1983; Voydanoff, 1988; Voydanoff and Kelly, 1984)).

A few studies showed how the amount of hours differ between occupations (Gerstl, 1961; Wilensky, 1961; Willmott, 1971). Wilensky (1961) found that the majority of professors and lawyers worked more than forty-five hours per week. Half of the engineers in the study worked less than forty-five hours per week. Wilensky's conclusion was that not only do those in higher status occupations earn higher incomes, but those who are self-employed work more hours per week. When comparing professors, dentists and advertising men, Gerstl (1961) found that professors worked the longest hours, brought home the most work, and spent the least amount of time with their children. Gerstl (1961) and Willmott (1971) pointed out that when work hours overlap family hours, family conflicts arise.

Work and family conflict is most affected by the number of hours spent at work, workload pressures, and age and number of children at home (Voydanoff, 1988). Keith and Schafer (1980) found that men's ages and the number of children at home have the greatest impact upon their role strains of work and family, whereas, for women, ages of

children as well as spouses' and their own work hours added to their role strains.

Kanter (1977) proposed that the time of day a person works will also impact family dynamics. For example, conflict among shift workers can increase due to time patterns that do not match those of the other members of the family (Presser, 1987; Smith, 1974). Additionally, a person's perceived control over when to work (weekends or evening work) can have a buffering effect on the work and family conflict (Voydanoff, 1988).

Smith (1974) and Mott et al. (1965) concluded that night workers experienced stress related to limited time available to spend with their families and limited social life. But these workers had more time to assist their spouses with housework, running errands, and parenting when their children came home from school (Smith, 1974). More discord existed between husbands and wives of night shift workers than of other shifts; also men who worked afternoon shifts experienced more difficulty with their roles as fathers than men who worked other shifts. (Mott et al., 1965).

The presence of children living at home can also increase the complexity of family conflicts and working schedules (Kingston and Nock, 1985; Presser, 1987 and 1988; and Voydanoff, 1988). Most notable was the differences between genders and their work schedules, with wives most

likely to work non-days, relying on relatives (most often the husband) to care for the children (Presser, 1987). In dual-earner couples both spouses preferred wives to work less hours. Additionally, both spouses wanted the wives to have more of the childcare responsibilities rather than husbands (Presser, 1988). Presser hypothesized that due to the changing economy, women will more likely fill non-day work than men, resulting in an increasing role of fathering in the home. Thus, the increase of the role of fathers in the home is due to women in non-day work, not because of ideological orientation or role-sharing needs of women.

Time and Timing in Dual-Career Couples

Blood and Wolfe (1960) concluded from their study of the influence of work hours on families that a highly satisfying marriage is not compatible with large amounts of time spent away from the family pursuing a higher income. When wives work out of choice rather than for monetary reasons marital satisfaction is higher (Orden and Bradburn, 1969). Husbands in dual-earner couples showed no differences in marital satisfaction from husbands with non-employed wives; husbands also indicated that the benefits of both spouses' working outweighed the disadvantages (Booth, 1977). Wives who work and housewives also were not different in overall life satisfaction. Working wives indicated that they liked the independence and money but lived more complex lives. Clark, Nye, and Gecas (1978)

concluded that the "value" men place on their family roles while away from work can mediate the effects of work time on marital satisfaction. The more involved men are in their family roles when they are at home, the better their chances for greater marital satisfaction. These examples show the complexity of the impact of time on families and marital satisfaction. Summarizing, these studies indicate that it is not so much the amount of time spouses in dual-earner families spend away from the family, but the value of the working situation that is placed on the mother who works outside of the home.

The literature shows clearly that the amount of hours worked can vary according to occupation, creating unique family dynamics due to the interaction of occupation and family time (Elliot, 1979; Gerstl, 1961; Mott, et al., 1965; Smith, 1974; Wilensky, 1961; and Willmott, 1971). Kanter (1977) challenged researchers to investigate not only across occupational categories but within them. Twenty-three different specialties within the occupation of "physician" provide a variety of options with differing amounts of hours worked and time of day worked. In the next section the issue of the time physicians spend in practice and the timing of those work hours is discussed.

Physicians' Time and Timing

Literature in the medical field indicated that physicians work long hours, averaging between 40 to 80

hours per week (Elliot, 1979; Gabbard, Menninger, and Coyne, 1987; Ottenberg, 1974). Ottenberg (1974) describes the "physician's disease," in which physicians become over-involved in success and work addiction, averaging between 60 to 80 hours a week in medical activities. These activities range from direct patient contact, consulting, and taking calls at home, to emergencies, reading journals, and going to meetings (Garvey and Tuason, 1979). This work addiction to the medical profession is not only accepted but taught as part of their preparation (Coombs, 1971; Gerber, 1983; Royer, 1978; and Zimet and Edwards, 1978).

In a study that analyzed differences between male physicians and their wives, and male dentists and their wives, 82 percent of the physicians worked more than 50 hours per week, whereas 88 percent of the dentists worked less than 50 hours per week (Elliot, 1979). As a result, physicians and their wives spent less time talking with each other and less time turning to each other for emotional support than did the dentists and their wives. The weaknesses of this study was the small sample size (38 junior hospital doctors and their wives and 16 general dental practitioners and their wives) and the restrictions given to the sample that reduced the size. These restrictions included age (only physicians and dentists under age 38), spouse employment (no wives were employed), and work experience (3-12 years).

Gabbard, Menninger, and Coyne (1987) compared physicians who worked over 60 hours a week with physicians who worked between 40 and 60 hours a week. They found no significant differences in marital gratification between the two groups of physicians or their spouses. Although physicians work long hours, Gabbard et al. concluded that time involvement by the physician or the physician's spouse allowed them the excuse of externalizing the internal conflicts in the marriage. Physicians, more than spouses, complained of time away from the family as a problem area in their marriage. Spouses in the study saw the lack of intimacy as a bigger marital problem. Gabbard et al. interpreted these findings to mean that time away from each other was not the biggest obstacle in marital intimacy; the larger problem was that physicians' needs for intimacy were fulfilled through contact with their patients and colleagues. As a result, physicians' intimate needs were satisfied at work, therefore, they needed less and gave less intimacy at home.

Studies indicated that the reasons for physicians working such long hours varied from personality compulsiveness (Gabbard, 1985; Krakowski, 1982; Ottenberg, 1974) to the avoidance of marital problems (Evans, 1965; Gabbard, Menninger, and Coyne, 1987; Miles, Krell, and Lin, 1975; Vaillant, Sobowale, and McArthur, 1972; Vincent, 1969). The studies agreed that the amount of time

physicians spend in medical practice negatively impacts their family, but results were not conclusive as to whether the marital dissatisfaction is a result of the physician's time at work or whether the physician's time at work is a result of marital dissatisfaction.

These styles of medical marriages appear to be similar to Cuber and Harroff's (1965) types of marriage in upper-middle class, successful professionals. They identified five difference types of relationships that explain marital satisfaction: conflict-habituated, devitalized, passive-congenial, vital, and total marriages. The "conflict-habituated" marriage was characterized by a high degree of chronic disagreement and long term arguments. The "devitalized" relationship was described as one that began with deep intimacy but gradually deteriorated to a state of apathy with no passion and little intimacy. "Passive-congenial" marriages were defined as relationships of convenience, similar to the "devitalized" marriages with the absence of romantic beginnings. In the "vital" marriage, both partners retained a sense of individuality, but also shared important experiences and values, and felt genuinely 'happy' about their relationship. The "total" marriage was similar to the vital marriage with the addition of greater commitment, more intense agreements in values and issues, and more intimacy in all aspects to the point that the marriage and the marriage partner were the

most dominant focus in the couples' lives. The literature seems to indicate that many physicians' marriages resemble the "devitalized" or "passive-congenial" marriages described by Cuber and Harroff.

As previously mentioned, within the medical profession there are different fields that demand different amounts of time and energy and responsibilities. Gerber (1983) identified the specialties of anesthesiology, dermatology, pathology, and radiology as presenting fewer demands on physicians and as allowing physicians more control of working schedules compared to the specialties of internal medicine, obstetrics-gynecology, pediatrics, and surgery. For the latter group, the balancing of work and family life was more difficult. According to Gerber (1983), physicians in specialties with more control of work schedules also were involved in indirect patient care, whereas those who were involved in direct patient care had less control and more demanding time schedules. With different specialties requiring different amounts of time and responsibility, the assumption can be made that physicians who spend more time at work could also experience lower marital satisfaction. When analyzing the propensity towards divorce among persons in different professional occupations, Rose and Rosow (1972) found that certain subgroups within the medical specialties (such as orthopedists and psychiatrists) "appear" to have the highest rate of marital instability

but that they could not give any firm conclusions due to the smallness of the sample within each specialty.

Garvey and Tuason (1979) also investigated marital instability according to medical specialty. They concluded that physicians as a general group had poor marriages but that there were no differences among the specialties concerning marital instability. The major weakness with Garvey and Tuason's (1979) study was the small sample sizes within the medical specialties. For example, Garvey and Tuason showed that the majority of groups (13 of their 17 specialties) were comprised of 5 or less physicians. Garvey and Tuason also conjectured that although physicians stayed married, it was because of financial security and concern over social status, but that there was "no substantive information indicating this assertion is true."

In the book How To Choose A Medical Specialty, Taylor (1986) described each of twenty-four medical specialties and their sub-specialties in detail, including a typical day, personality types, incomes, and likes and dislikes of physicians within those specialties. Taylor found a variety of differences among the medical specialties. The specialties with the longest amount of hours spent working per day included Neurological Surgery and Orthopedic Surgery, averaging between 12 to 15 hours per day with a large amount of on-call responsibilities. Those specialties with the most control of working schedule and

the least amount of time working per day (averaging 8 to 10 hours) were Allergy and Immunology, Dermatology, Nuclear Medicine, Pathology, Physical Medicine and Rehabilitation, Preventive Medicine, Radiology, Psychiatry, and Urology. The specialties of Family Practice and Pediatrics averaged between 9 to 10 hours per day but their days could be very disruptive due to emergencies or being on call. The remaining specialties, General Surgery and Obstetrics and Gynecology, averaged 10 to 12 hours per day with on call hours.

Most of the research on physicians and their work indicated that many differences exist among the medical specialties (Garvey and Tuason, 1979; Gerber, 1983; Krakowski, 1982; Rose and Rosow, 1972; Taylor, 1983; and Vaillant, Sobowale, and McArthur, 1972). One of those differences may be marital satisfaction, but this conclusion is not well founded due to small sample sizes. Thus, further research with larger sizes of responses in each of the specialties is needed.

The literature has shown that the practice of different medical specialties involves varying investments of time, control of scheduling, and disruptions due to on-call and emergency situations. Differences between medical specialties may also include how physicians experience their families, although no literature thus far has analyzed these differences. The literature analyzed

differences in amounts of time involved in work but did not look at how the timing of work impacted physicians' families, such as the impact on physicians' spouses when physicians are on call, or the timing of "on-call", that is, evenings versus weekend hours. Additionally, none of the literature examined the impact of the spouses' commitment toward the physicians' work on the marital satisfaction of the medical couple. Finally, the literature does not examine the issue of gender; that is: Do female physicians spend as much time working as male physicians? Do female physicians spend more time in child care than male physicians? And do female physicians have more control of their working hours than male physicians? These issues need to be addressed.

The Rewards of Work

According to Kanter (1977), a job can produce material and psychological rewards and resources. Lewis and Spanier (1979) have hypothesized that greater job status among husbands is associated with greater marital and personal adjustment, especially among wives. Aldous, Osmond, and Hicks (1979) indicated that occupational success and marital satisfaction rise proportionately, until a certain point when the extremes of success may cause marital satisfaction to decrease. Lewis and Spanier (1979) also theorized that when family income rises marital quality also rises. Orden and Bradburn (1968) indicated that when

wives work because they choose to rather than from economic pressures, marital quality is higher. The amount of value or status the community places on the occupation will also influence the marital quality, such that the higher the status the higher the marital quality (Lewis and Spanier, 1989). In dual-earner families the status of the wife's occupation may have a negative impact on marital quality. Piotrkowski and Repetti (1984) indicated that if the wife's status is higher than the husband's status, the wife's status will not negatively influence the marriage if she earns less income than her husband.

When rewards and resources are viewed in the terms of income, they can influence an individual's self-concept, power, security, sense of freedom, social relationships, love toward another individual, and even conflict (Knox, 1985). Knox indicated that when money or income increases, any of the above factors could also increase, for example, the more money an individual obtains the more powerful or successful the individual feels.

Physicians' Rewards

Physicians have always been held in high status and are assumed to make large amounts of money. The amount of income physicians make will vary according to the medical specialty and the working environment (private practice, hospital setting, or university setting). Taylor (1986) used the 1984 American Medical Association Socioeconomic

Monitoring System Report and the Roth Young Personnel Service, Inc. 1986 Wage and Salary Review to show the differences among medical specialties. Physicians' incomes ranged from a low-medium range of \$68,000 - \$76,000 (Pediatrics) to a high-medium income of \$154,900 (Anesthesiology). The second highest paid specialties were the sub-specialties of surgeons, ranging between \$130,000 to \$148,000, with Obstetrics and Gynecology (\$137,000) and Radiology (\$140,000) also fitting in the same range. Even though these incomes are high, the Surgery and Obstetrics and Gynecology specialties also have the highest insurance premiums.

Taylor (1986) asked 282 physicians to respond to questions about what they liked best and what they liked least about their specialties. None of the respondents indicated that they had chosen their specialty because of its high status or amount of income they would make. However, a number of physicians perceived their specialties to be lower in status than other specialties. For example, anesthesiologists indicated that they experienced lack of appreciation and recognition from both the public and other medical professionals. Physical Medicine and Rehabilitation specialists also wanted more appreciation from other physicians but these physicians seemed among the happiest about their career choice. Psychiatrists felt that the public had negative attitudes towards psychiatry

and towards psychiatric patients, while Pathology, Radiology, and Nuclear Medicine specialists felt that other physicians viewed them as technicians and not as "real doctors".

One study investigated the types of rewards and costs that physicians perceived (Mawardi, 1979). Mawardi randomly selected 180 physicians from nine different specialties from alumni of a northwestern medical university. The data were drawn from interviews in the physicians' offices and answers to brief questions about satisfactions, dissatisfactions, and stresses associated with their work. The data were not analyzed statistically. Mawardi found that physicians experienced the psychological reward of being needed as offering the greatest satisfaction, followed by successful management of difficult cases (that is, the physician was able to save a life or make a person more comfortable), and building personal relationships with their patients and patients' families. Some of the physicians indicated that doing well financially was important; however, some physicians also remarked that making money was something they enjoyed at the beginning of their medical practices, but now, time off work was viewed as more important. Occupational dissatisfactions included lack of leisure time, high work pressure, too many patients to be seen in too little time, too large a case load, and too much on-call work.

Occupational rewards in the study differed depending on the specific medical specialty or work environment. For example, doctors serving on a medical school faculty, a group with little direct patient care, were the most satisfied with their occupations while surgeons were the most satisfied among the private practitioners, with pediatricians being the lowest in job satisfaction.

Mawardi (1979) mentioned the financial differences between physicians who were starting their practices and those who had an established practice, indicating that financial differences depended on the physician's age and length of time practicing. If physicians' income differs according to their ages, the question must then be raised: does this difference affect the marriage and family of physicians as well? The assumption might be made that as physicians get older, they accumulate more status, more money, and more resources, making the family and marital dynamics different from those at younger ages.

Another reward found in the medical arena is medicine itself. While the American Medical Association states that physicians are not to treat their own family members, many physicians do (West, 1984). For example, some physicians prescribe drugs to family members (Miles, Krell, and Lin, 1975; and West, 1984). When physicians treat their own spouses, the medical problem is often berated or ignored or treated with a quick remedy so that physicians will not

have to deal with sick people at home (West, 1984). Even physicians choose not to treat their own families, they have more access to the medical community, such as other colleagues and facilities, as additional resources that are not available to the non-medical population. For example, West (1984) found that wives of physicians were admitted into hospitals quicker even if the hospital was busy or overcrowded, especially if it was an emergency. Some physicians will treat their physician friends and families at no charge (professional courtesy). West (1984) found from interviews of physicians' wives that these rewards also had hidden costs, such as physicians who were not willing to take a stand on a medical issue because the patient was the wife of another physician, or the need to cancel prescriptions given to their wives if they disagreed with the decision of her physician. Additionally, because physicians treated their own families outside the office setting or after regular office hours, no records were kept, and support of nurses or other medical staff was not provided.

The resource of prescription drugs is so readily available to physicians and their families that usage of drugs when coping with personal problems makes medical families at high risk for drug abuse. Lewis (1965) found that physicians' wives who had been hospitalized had a much higher usage of alcohol, barbiturates, amphetamines, and

narcotics and more marital discord than the wives of physicians who had not been in the hospital. Lewis attributed these symptoms to their husbands' occupations.

Modlin and Montes (1964) determined that narcotic addiction among physicians is approximately 30 to 100 times higher among physicians than among the non-physician population. They also found that addiction occurs sometime within 5 to 10 years after the physician begins practicing medicine. They described narcotic addiction among physicians as "almost an occupational hazard."

In summary, rewards and resources of physicians include income, community status, availability of drugs, more alternatives for treating their families, and access to the medical community at no or little cost. These resources also can be costly to the marriage relationship when the physician is making decisions as a physician rather than the spouse making personal medical decisions such as whom to see for medical problems and whether to follow the prescribed regimen.

The Emotional Working Climate

Kanter's (1977) last area of focus was the emotional climate in a person's work place and the person's relative placement in that organization. The emotional climate of an occupation is how "a person's work or relative placement in an organization can arouse a set of feelings that are brought home and affect the tenor and dynamics of family

life" (Kanter, 1977, p. 47). Job characteristics that affect the emotional climate include: role ambiguity, role conflict, intellectual and physical effort, rapid change, stress in communicating, quality pressures, and quantitative overload (Burke, Weir, and DuWors, 1980; Jones and Butler, 1980; Katz and Piotrkowski, 1980; cited in Voydanoff, 1988, p. 750). Additionally, Piotrkowski (1979) identified three elements where the work environment can influence the interactions of the employee and the employee's family. These elements were: 1) positive carry-over, where the worker experiences a satisfying work day and returns home having emotional space to interact with family members; 2) negative carry-over, where the worker experiences stress on the job and brings the stress home at the day's end; and 3) energy deficit, where the job causes the worker to be so tired either physically or mentally that the worker has difficulty being involved in family interactions.

In her review of the literature Kanter cited studies which postulated that unpleasant, dissatisfying jobs add to family conflicts in general (Bradburn and Caplovitz, 1964; Dyer, 1964; Hammond, 1954). Kanter cited other studies specifically indicating that the husband's work can place great amounts of pressure on the wife due to her expectations of what her role as a wife should be (Seidenberg, 1973). Another type of pressure evolves when

occupations require a high level of interaction and deep involvement with other individuals. In one study, the wives of men in a position of corporate personnel training found their husbands to be distant and insensitive at home because of what Kanter (1977) called "interaction fatigue."

Tensions at work can also affect an individual's performance as a parent. McKinley (1964) found that lack of approval at work led to frustration, which led to hostility, regression, or withdrawal from the family, and that differing occupations with differing levels of prestige and social approval were related to the level of hostility and severity versus emotional support of parents (especially fathers).

McKinley (1964) also hypothesized that the amount of autonomy an individual has at work mediates the amount of hostility at home. In Voydanoff's (1988) study of work and family conflicts, perceived control over work characteristics had a buffering effect on work and family conflicts. Furthermore, Kanter (1977) stated that people feel happier about themselves and bring home fewer "gripes" when they feel good about what they do at work.

Barling (1984) found a positive relationship between marital satisfaction and job satisfaction, in that the amount of job satisfaction has a positive influence on the marriage. The emotional climate of an occupation is similar to the rewards and resources of an occupation in

that it can either add to or subtract from the work and family conflict.

Kanter (1977) concluded that factors inherent in the emotional climate of one's work that affect the dynamics of the home environment include job satisfaction and the amount of autonomy or control one has over work and work pressures. Physicians are involved in an occupation in which the emotional climate of the job has dramatic impact on the physicians' familial dynamics.

The Physicians' Emotional Working Climate

McCue (1982) theorized that the nature of patient problems has a strong impact on the dynamics of physicians and the physician's family. These problems not only create pressures for physicians to deal with, they impact the physician's attitude toward job satisfaction and control over the work environment. Patient problems center on the patient's suffering, fears, sexuality, and death. Additionally, many patients exhibit behaviors that are clinging, demanding, rejecting, or denying, so that physicians' concerns or frustrations about the patient spill over to affect their functioning in non-medical roles.

Persons involved in high interaction occupations often react to those emotional demands by withdrawing from contact in the home (Kanter, 1977). Negative carryover can occur in the physician's family if the physician is

concerned about a patient while the physician is at home. Additionally, Elliot (1979) found that due to the work of physicians and their involvement with patients, staff, and colleagues, they could not fulfill their spouses' needs for intimacy and adult companionship, and that often the physician felt that needs in those areas had already been filled by other individuals. Elliot's study included only male physicians; thus, there could be a difference between male and female physicians' intimacy needs or how each may fill those needs with either spouses or patients.

Coombs (1971) found that family conflict resulted because of the physician's loss of status when the physician was at home. At home the physician was not the doctor anymore, but spouse and parent, and the physician's spouse responded to the physician as a person, and not "the doctor".

When looking at the issue of control physicians have over their work, the literature indicated differences between physicians who are involved in direct patient care and physicians who are involved in non-direct patient care. Vaillant, Sobowale, and McArthur (1972) concluded that those physicians who were involved in direct patient care were more likely to have poor marriages, seek psychotherapy, and use more drugs and alcohol than those physicians who were not involved in direct patient care. Vaillant et al. attributed these symptoms to the quality of

childhood experiences of the physicians and that physicians with negative childhood experiences chose medical specialties involving more direct patient care. Vaillant et al. also indicated that due to the smallness of the sample (16 physicians) these findings were only suggestive.

Gerber (1983) suggested that in order for physicians to deal with work pressures, disruptions of work, and family, that some physicians choose to practice in clinics or group settings. When Mawardi (1979) analyzed job satisfactions and dissatisfactions among medical professionals, results indicated that private practitioners suffered more from time pressures and paperwork than other medical professionals. Medical faculty were the most satisfied with their jobs and private practitioners were the least satisfied (Mawardi, 1979). Within private practitioners, pediatricians ranked lowest in job satisfaction. Even though Mawardi did not examine how these differences in job satisfaction impact physicians' marital satisfaction, Kanter's (1977) assumption that individuals who are satisfied with their work are also prone to be satisfied with their marriages, implies that physicians who are satisfied with their jobs would also have higher marital satisfaction than physicians who are dissatisfied with their jobs.

The emotional climate of the work environment can be very costly to physicians. Garvey and Tuason (1979) cited

a McCall's magazine article (September, 1969) entitled "Never Marry a Doctor," which stated that physicians were "poor husbands, poor fathers, absent companions, and about as useless in bed as an electric blanket when the power is off" (p. 131). In a classic study on medical students and physicians, Gerber (1983) indicated some reasons for these stereotypes:

"The special duties and status associated with medicine, the push to giving time, work, energies, and money into career first, and the caring that is given to work and patient needs can mean that there is less caring left for the spouse and family. And there exists the possibility that the marital relationship will be permanently unbalanced so that one member will continue to 'count more' and grow more than the other. In this context it can almost be considered 'legal' for the more important member to care more for career than for his/her loved ones at home" (p. 115).

The literature has indicated that the emotional climate affects physicians and their families by negative carryover, lack of control of working schedules, and concerns for patients that make family members feel they are second priority. Studies did not mention differences in medical specialties, working environment, age of the physician, or the physician's gender, which would also have an impact on how physicians react to their emotional working climate.

In addition to Kanter's (1977) discussion of the five elements of work and family, a review of the literature will be presented that addresses the general issues surrounding physicians' marriages.

Factors Other Than Aspects of the Work/Family Overlap That Influence Marital Satisfaction

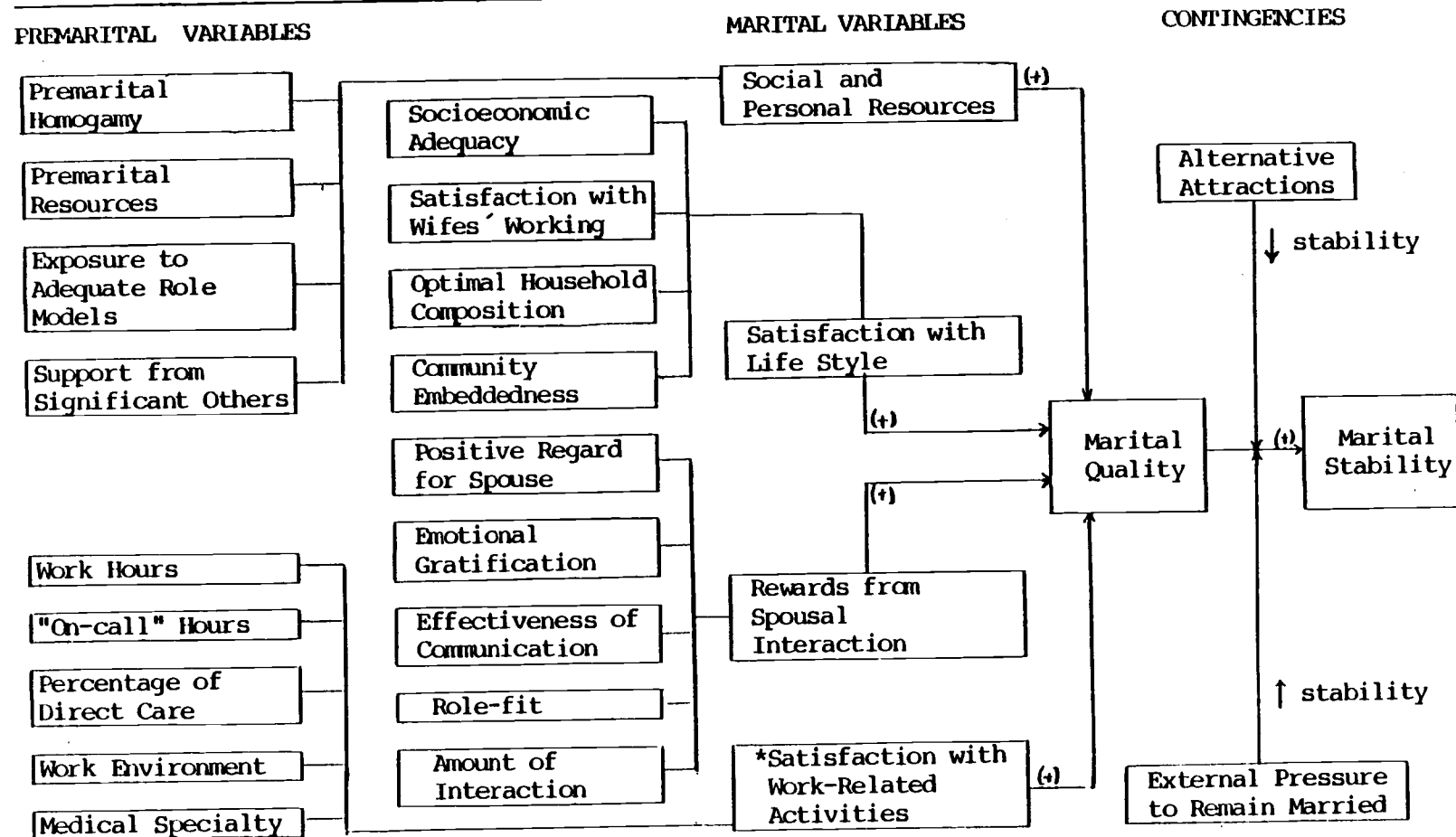
Lewis and Spanier (1979) suggest a number of elements that can affect marital stability positively or negatively. A stable marriage refers to a marriage that is "intact" while an unstable marriage is one that has been "willfully terminated by one or both spouses" (Lewis and Spanier, (1979). Marital satisfaction differs from marital stability in that the stability of the marriage deals only with the outcome of the marriage, while marital satisfaction is a subjective evaluation of the marriage. Throughout the literature, marital satisfaction has been used interchangeably with marital quality, happiness, and adjustment (Lewis and Spanier, 1979). Throughout this paper this subjective concept is referred to as marital satisfaction. Figure 2 is an adaptation of Lewis and Spanier's theory of marital quality (satisfaction). This theory indicates that the areas of "social and personal resources", "satisfaction with life style", and "rewards from spousal interaction" are the major determinants of marital satisfaction. The literature on medical marriages showed that while these factors impacted the marital satisfaction of physicians and their spouses, an additional factor contributed to marital satisfaction. This additional factor was the work related characteristics of the physician's job. These characteristics included hours

per week physicians worked, the percentage of direct care physicians provide patients, "on-call" hours, medical specialties and the working environment of physicians. Figure 2 shows that these work-related characteristics are an additional factor influencing the marital satisfaction of physicians and their spouses.

Overall, the literature does not indicate that physicians and their spouses have very satisfying marriages. For example, in the book, Married to their Careers: Career and Family Dilemmas in Doctors' Lives, Gerber (1983) devoted major sections to reasons for unhealthy medical marriages. These reasons include: egocentricity of the physician, no one to be doctor to the doctor and his/her family, exceedingly high expectations, and defining oneself solely on the basis of one's work. Gerber mentioned only one couple whom he felt had a good medical marriage, this couple had fun together, joked and teased each other in warm ways, and the physician spent less time being a "good doctor".

In one of the few studies on physicians' marriages that used random selection (Garvey and Tuason, 1979), physicians rated their marriages as average. They had fewer divorces than did the general population and they did not associate their working hours with poor marriages or divorce. Interpreting these findings, Garvey and Tuason concluded that even if the physicians tended to overrate

FIGURE 2. A theory of marital quality and marital satisfaction



Adaptation of Lewis and Spanier (1979).

* Additional Factor Influencing Marital Quality (Satisfaction)

their marriages, they at least viewed their marriages as being no worse than the average marriage in the general population. Garvey and Tuason also found that physicians who rated their marriage above average also considered their spouses to be extroverted. Garvey and Tuason found no correlation between the reported quality or stability of a marriage and whether wives of physicians worked outside the home.

Gabbard, Menninger, and Coyne (1987) conducted a study of couples who attended a continuing education workshop for physicians and their spouses. The workshop had been offered by the Menninger Foundation every year for ten years. Questionnaires were sent to all of the couples who attended the workshops. These questionnaires were used to study marital dynamics, satisfaction, and conflict. The respondents tended to have "traditional" marriages and were considered to be motivated to work on aspects of their marriages as evidenced by their attendance in a marriage workshop.

While this study may have shown some weaknesses or bias, an advantage seems to have been that the participants were perhaps more candid about their marital relationships due to their participation in the workshop and their affiliation with the Menninger Institute. An additional strength was that researchers were able to pair the results of both husbands and wives.

The results of the Gabbard et al. study indicated that physicians who had never considered marital counseling had significantly higher marital satisfaction than those who had considered or received counseling. The results also indicated that the areas of conflict centered most on 1) tension in the home, 2) quality of sex life, 3) finances, 4) lack of intimacy, and 5) religious differences. More specifically, the physicians' major concerns were that their spouses were sexually disinterested, while the spouses' major concerns were that their physician-husbands were unwilling to communicate. Gabbard et al. interpreted these data to mean that physicians' spouses have a higher need for intimacy than do physicians because the physicians may be filling their own needs for intimacy through contact with their patients and colleagues.

While these results were found in physicians' marriages, these issues do not apply selectively to physicians. Communication, sexual difficulties, finances, and intimacy have been found to be problems in both clinical and non-clinical couples (Blumstein and Schwartz, 1983; Klagsbrun, 1985).

Gabbard et al. also found that the amount of time spent in communication differed significantly among the marriages. Those persons who had never considered marital counseling spent an average of 20 minutes more each day communicating with each other than those who had received

or had considered marital counseling. Additionally, the study concluded that physicians' long hours may not be the cause of the marital problems, but may be 1) a way to externalize the conflicts in the marriage onto factors outside the marriage, or 2) a way to avoid emotional closeness in the home.

Several studies examined the characteristics of wives of physicians (Coombs, 1971; Evans, 1965; Lewis, 1965; and Miles, Krell, and Lin, 1975). Many of these studies were conducted on wives who were in hospital psychiatric units. Miles, Krell, and Lin pointed out that while these women were characterized as dependent and overemotional, they had husbands who were emotionally detached and who added to their wives' problems by denying them psychotherapy and treating their problems with medication only. These women also had high rates of suicidal thoughts and unsatisfying sexual relationships. It is interesting to note that none of the women in this study participated in couple therapy with their husbands.

Lewis's (1965) study supported the findings of Miles et al. (1975) and provided more insight into marital dynamics. In an attempt to get their husbands' attention and as a method of coping with the marriage, physicians' wives became "ill". Lewis mentioned three issues in medical marriages that became difficult before wives reached the point of illness. The first area of difficulty

was lack of communication: the couples rarely talked or shared feelings, but when they did, they communicated extremes of either warmth and love or hostility and aggression.

The second area of difficulty was the failure to define marital roles. This was made increasingly difficult when the physician took the work role home. At work, physicians' roles were more authoritarian; they listened, examined, made decisions, and gave directions. This behavior became a problem at home.

The third area of difficulty was the couple's sexual relationship. Lewis indicated that some physicians found sexual intimacy so frightening that they worked long hours and busied themselves to avoid sexual relations. Lewis concluded that physicians' jobs can thus be both a shield and a weapon for marital conflicts. Literature on sexuality and marriage indicated that this dynamic is true of marriages in general, especially marriages dealing with sexual dysfunctions (Clifford and Kolodyn, 1983).

The expectations associated with being a physician's wife were another area of difficulty in medical marriages. These expectations can be illustrated by the findings in Coombs' (1971) study when the physicians were asked, "What kind of woman can be successfully married to a medical man?" Their responses described the "ideal wife:" understanding, accepting, altruistic, nondemanding, self-

sufficient, and outwardly oriented.

Coombs (1971) also found that physicians' wives are often disillusioned with their marriages, to the point that Coombs concluded that "the more successful the physician, the more disillusioned the wife" (p. 157). Physicians' wives felt they had been disillusioned by an unrealistic concept of the roles of physician and husband. The wife had mistakenly believed that the ever-listening, sensitive doctor who helps everyone would be no different in his role as a husband. Wives had the expectation that, after medical school, when he had a private practice and his own hours, she would see him more often, and they would "live happily ever after". Wives also felt disillusioned by the fact that physicians did not doctor their own children as well as they did their patients. Eventually, this disillusionment led to resentment, emotional regression, and involvement in compensatory activities, such as children, outside employment, or competition among other women for status and money.

In a study by Owen (1966), questionnaires received from 403 physicians and 323 physicians' spouses revealed that only 5 percent of the wives and 4 percent of the physicians were dissatisfied with their spouses. However, nearly one fourth (23%) of these couples had sought professional help for marriage and family problems.

Gerber (1983) indicated that about half of the

students who were married during their medical training were divorced by the end of their residency. He also stated that divorce occurs at specific occupational time spans. The greatest number of divorces occur at the end of medical school through the first year of residency, at the end of residency through the first year of practice, and at approximately ten years into practice.

While there seems to be considerable evidence that physicians and their spouses experience difficult and unsatisfying marriages, the conclusions of these studies must be held subject to question, due to methodological weaknesses (for example, small sample sizes, researcher and respondent bias, non random samples, and low response rates). In one of the more statistically sound articles, Rose and Rosow (1972) researched the physician's propensity toward divorce. Rather than collect data through interviews or questionnaires, they analyzed 57,514 initial complaints for divorce, separation maintenance, and annulments. If a person (either husband or wife) filed for any of the above reasons Rose and Rosow defined them as having an unstable marriage. They analyzed the complaints of twelve "professions", including physicians. Rose and Rosow concluded that physicians were no more prone to divorce than other professionals of similar age, status, education, and income.

Rose and Rosow indicated that, among physicians whose

marriages did fail, the breakup occurred most often at the height of the physicians' medical career, between the ages of 35 and 44. The data also showed that race and medical specialty within the profession appeared to be factors in marital instability. Black doctors had 70 percent more initial complaints than white doctors, and orthopedists and psychiatrists had the highest rate among medical specialties (although the sample group within each specialty was too small to produce any statistically significant data). The weaknesses of this study included the low number of sample cases among the medical specialties, the lack of followthrough beyond initial complaints and the fact that the study was conducted 20 years ago.

Interpersonally, physicians' ages seem to make a difference in how their spouses view marital satisfaction (Glick and Borus, 1984). The data in this study were collected only from physicians' wives rather than from both spouses. Young spouses (ages 25-35) were not as willing as older spouses to give up or delay their own career development. This resulted in career competition within the marriage as well as little time for each other. Spouses in the midlife range (35-50 years old) initially accepted their roles as physicians' wives, but were either depressed (thinking their lives had passed them by) or attempting to re-enter the work force. The last group of spouses (50

years and older) were more committed to the absorptive role of the "doctor's wife", taking care of the home and family. Glick and Borus's conclusions were somewhat suspect due to the fact that their study had an N of only 13. They suggested that further research is needed for conclusions dealing with age and marital satisfaction. Glick and Borus did not mention any cohort effect with the wives, but young wives are more likely to have peers in the work force.

Although this study has a weakness due to the size of the sample, it does give support to differences occurring in medical marriages due to age. Other studies (Evans, 1965; Rose and Rosow, 1972; and Miles, Krell, and Lin, 1975) indicated that the period between the ages of 35-45 is the most vulnerable time for physicians' marriages. This period is also at the peak of the physician's career (Desole et al., 1968). These findings support life span studies indicating that this stage (35 - 44 years old) has low marital satisfaction, attributed to the complexities of childrearing, particularly for working mothers (Cole, 1984; Kotler, 1985; Saez-Sanz, 1984).

While there seems to be some controversy over how satisfactory a physician's marriage is, a few of the studies offered insight as to why physicians' marriages might be poor. Reasons range from the physician's need to be omnipotent, doctoring one's own spouse, and marrying not

partners but "patients" (Garvey and Tuason, 1979; Vaillant, Sobowale, and McArthur, 1972; West, 1984). Gerber (1983) also indicated that unhealthy marriages were due in part to a life's work geared toward helping other people. A physician responds first to patients, "those who need me most," and then to family, ignoring his/her own needs. As this pattern becomes established over the years, when the physicians are men, the wife can feel abandoned and victimized by the husband she helped and supported through years of training. She develops a sense of loneliness or abandonment, especially during crucial family events, such as pregnancy, illness, and raising children (Taubman, 1974).

The literature on physicians' marriages would support that these marriages are disillusioned, have low intimacy, difficulty in marital roles, and are prone to dissatisfaction and divorce. Additionally, these studies showed that there are differences among medical specialties within these problem areas, as well as critical time periods (ages 35-45) when these marriages and marital partners are more prone to problems. Though these studies make claim to conclusions and suggestions concerning these differences, the weaknesses of the studies also suggest the further research is needed.

Characteristics of Female Physicians

Most of the literature reviewed here is based on male

physicians. It is worth considering whether the marriages of female physicians would have the same dynamics. Only one study involved a large enough sample size to look at dynamics in the lives of female physicians (Rose and Rosow, 1972). This study included a sample of only 18 females compared to 249 males. It concluded that among physicians, females have a 48 percent greater chance of divorce than males. In addition, 31 percent of female physicians never marry compared to only 8 percent of male physicians (U.S. Bureau of the Census, U.S. Census of Population: 1964). Gerber (1983) also indicated that female physicians may suffer from the same dilemmas and problems as male physicians, but that female physicians seem more aware of the problems of work and family and are more committed to finding a balance between the two. Although Gerber draws these conclusions, he gives no data on the number of female physicians included in his study nor how this particular information was gathered. Other studies (Gabbard, Menninger, and Coyne, 1987; Garvey and Tuason, 1979; and Krakowski, 1982) in which female physicians were part of the research population did not make hypotheses or conclusions regarding the dynamics of the female physicians' lifestyles. This was due to the small number of female physicians in the studies.

One of the major weaknesses of research concerning physicians and their marriages is the lack of information

dealing with female physicians, physicians whose spouses are employed, and marriages wherein both spouses are physicians. Research in these areas needs to focus on work and family issues as well as the dynamics within the marriages themselves. Additionally, the roles of medical specialty, age, and working environment need to be addressed in research dealing with female physicians, dual-physician couples, and dual-career couples.

Summary

In summary, the literature on physicians and their families has shown how physicians' lives are impacted by an occupation in which physicians are so absorbed by their work that it is their first priority, demanding high time involvement as well as disruptive time involvement, and resulting in rewards that often cause more marital and spousal dissatisfaction. As a result of the physician's occupational culture, the view of "self" is one of omnipotence that covers self-doubts, fears and insecurity. Additionally, physicians experience an emotional working climate that has high work pressures, little control of schedules, and is intermixed with concerns for patients that can cause conflict with the physician's marital intimacy and satisfaction. Each of these areas (absorption, time and timing, rewards, cultural views, and emotional climate) is influenced by physicians' age, specialty, and working environment. In addition to the

work and family dynamics the literature also indicated that both physicians and their spouses respond to the pressures associated with the medical profession through specific behaviors. These behaviors include drug and alcohol abuse, suicide, working long hours, denial of family problems, resistance to professional help, intimacy and sexual conflicts, and psychosomatic illnesses. In addition to these behaviors, the literature showed that many medical marriages experience low satisfaction and that marriage problems begin as early as medical school or, in some cases, can be the result of dissatisfactory childhood experiences. The literature also suggested a correlation between the health and satisfaction of the physician's marriage and the following aspects of the physician's life: 1) the physician's peak career development (usually between the ages of 35 and 45); 2) the working environment, such as hospital, clinic, and private practice settings; and 3) occupational and personal life control among medical specialties. Overall the literature suggested that Kanter's work/family overlap dimensions influence marriages as well as specific work related characteristics of physicians' occupations. This study will examine how each of these areas (work/family overlap and work-related activities) impact the marital satisfaction of physicians and their spouses.

Statement of Problem

The literature on physicians and their spouses suggested that these marriages are prone to certain problems. These problem areas include high drug and alcohol abuse (Duffy and Litin, 1967; Lewis, 1965; Modlin and Montes, 1964; Vaillant, Sobowale, and McArthur, 1972), psychological problems, such as high suicide rates (DeSole, Aronson, and Singer, 1967), compulsiveness, depression, and self-doubt (Gerber, 1983; Krakowski, 1982; Vaillant et al., 1972; and Vincent, 1969). In addition, the time physicians spent in job-related activities often contributed to lower marital satisfaction (Coombs, 1971; Elliot, 1979; Evans, 1965; Gerber, 1983; Lewis, 1965) and higher divorce rates than were found in non-physician populations (Gerber, 1983; Ottenberg, 1974).

The literature contained speculative conclusions suggesting that marital satisfaction can be influenced by medical specialty (Coombs, 1971; Gabbard et al., 1987; Garvey and Tuason, 1979; Gerber, 1983; Krakowski, 1982; Rose and Rosow, 1972; Vaillant et al., 1972), the physician's working environment such as hospitals, clinic and private practices (Gerber, 1983; Mawardi, 1979), and the physician's life-cycle stage, particularly the ages from 35 to 45, at the height of physicians' medical careers (Evans, 1965; Glick and Borus, 1984; Miles, Krell, and Lin, 1975; Rose and Rosow, 1972).

The major weaknesses of research on medical marriages were: 1) the small size of the studies (ranging from an N of 13 to Ns of 100), resulting in speculation rather than sound conclusions; 2) lack of randomized sampling from a general population of physicians; 3) no comparisons of medical marriages against "normal populations"; 4) low response rates (the highest was 55 percent); and 5) inadequate attention to the dynamics of female physicians and their spouses and to dual-medical career marriages.

This study used the theoretical framework presented by Kanter (1977) to analyze how job absorption, time and timing, rewards and resources, occupational subculture, and the emotional climate in which the physician works can influence the marital satisfaction of physicians and their spouses. Additionally, this research project used a random sampling of a large population of physicians. This allowed responses to be analyzed according to additional variables that the review of the literature on physicians and their spouses suggests impact marital satisfaction. Physicians' work variables will include physician's medical specialty, work environment, age, the number of years physicians have worked, the number of hours per week physicians work, the average hours physicians are "on-call", and percentage of direct care physicians experience with their patients. Other family and individual demographic variables are gender, years married, income, and the number of children

living at home.

Two research questions will be answered as a result of this research project:

1. How are the various areas of work/family overlap articulated by Kanter (1977) related to the marital satisfaction of physicians and their spouses?
2. How does the demographic background of physicians and their spouses, in particular, job characteristics of physicians, relate to their marital satisfaction?

The following hypotheses were developed to expand on the two research questions. The first four hypotheses refer to the first research question and the last four refer to the second research question.

Hypotheses

Research Question One Hypotheses

Hypothesis 1. Physicians and physicians' spouses who perceive that the physician's job is highly satisfying will have higher marital satisfaction than will physicians and spouses who perceive that the physician's job is less satisfying. Job satisfaction will be measured by the scale developed from Kanter's work/family framework.

Hypothesis 2. Physicians and physicians' spouses who perceive that the physicians' work occupies a great deal of time will have lower marital satisfaction. Time use will be measured by the physicians' time control scale derived

from Kanter's framework.

Hypothesis 3. Physicians and physicians' spouses who perceive that the physician's job causes both physicians and physicians' spouses to suffer stress will have lower marital satisfaction, as measured by the physicians' work stress scale derived from Kanter's framework.

Hypothesis 4. Physicians and physicians' spouses who perceive that physicians are more involved in their job (as measured by the Physicians' Work Involvement Scale derived from Kanter's framework) will have lower marital satisfaction.

Research Question Two Hypotheses.

Hypothesis 5. Physicians who work more hours per week will experience lower marital satisfaction and will have spouses with lower marital satisfaction. Investigated along with hours per week physicians work will be the average hours per week physicians are "on-call" and the percentage of direct patient care.

Hypothesis 6. The marital satisfaction of physicians and their spouses will be higher when the physician's work environment is in a hospital or clinic, and lower in private or solo practice.

Hypothesis 7. Physicians in the various medical specialties will differ in marital satisfaction and the marital satisfaction of physicians' spouses will differ by physicians' medical specialty as well. The literature

indicated that percentage of direct care, hours spent at work, and work stress will vary by each medical specialty. These differences will influence marital satisfaction such that the higher amount of direct care, work hours, and work stress, the lower the marital satisfaction of physicians and their spouses. Medical specialties were separated according to the categories specified by the Oregon Medical Association.

Hypothesis 8. Physicians and their spouses who are in the lower middle-age range (35 - 45) will have lower marital satisfaction than physicians and their spouses who are in the younger age range (below 35) or the older age range (above 45).

III. METHODS

A survey was conducted using a random sample of physicians and physicians' spouses from the state of Oregon. The survey collected information from both physicians and physicians' spouses on demographics, marital satisfaction, perceptions of work/family overlap, and physicians' work environments. Marital satisfaction was assessed using an already established measure (Dyadic Adjustment Scale, Spanier, 1976). Measures of perception of work/family overlap were derived from Kanter's (1977) framework. The questions concerning objective aspects of work environment were developed based on the medical literature.

Sample

In cooperation with the Oregon Medical Association (OMA) a random list of 1200 physicians' office addresses throughout the state of Oregon was provided. The OMA lists 4,600 physicians according to 23 different medical specialties and working addresses. These specialties are categorized according to the American Medical Association (AMA) specializations. Three hundred and one physicians' names were duplicated because they had more than one specialty. Those names were removed, resulting in a total of 899 physicians' office addresses.

Procedure

An adaptation of Dillman's (1978) protocol was used.

The first mailing to the 899 addresses included a cover letter for the physician (Appendix A), a cover letter for the physician's spouse (Appendix B), one questionnaire for the physician, one questionnaire for the physician's spouse, two return envelopes, and one return by mail 6 by 4 index card that physicians were asked to send back if they were not married (and therefore ineligible to participate) (Appendix C). Both cover letters explained the importance of the research, who was conducting the study, and the sponsoring organizations. Signatures on the cover letter included Mark Rampton, M.D., Former Secretary Treasurer of the Benton County Medical Association (BCMAA), Chairman of the Credentials Committee of the Corvallis, Oregon Good Samaritan Hospital Medical Association; Alice Rampton, President of Benton County Medical Association Auxiliary (BCMAA), Anisa Zvonkovic, Assistant Professor in the Department of Human Development and Family Sciences, Oregon State University, and David N. Bird, principal investigator.

One week after the initial mailing, a postcard (Appendix D) was sent as a thank you and as a courteous reminder to those who had not yet responded. Three weeks after the initial mailing, an additional cover letter and questionnaire was sent to those addresses where the physician had not yet responded. This cover letter (Appendix E) indicated that the questionnaires had not yet

been received and appealed for their response.

Response Rate

In the list provided by the Oregon Medical Association, there was no method of controlling for which physicians were married and which were not, thus the total response rate represents both married and non-married physicians, and spouses of physicians where the spouse completed and returned the questionnaire but the physician did not. Additionally, if both a physician and a spouse from the same marriage returned their questionnaires, only one person in the marriage was used in calculating the total response rate in order to avoid replication of the total sample.

Table 1 shows that out of the 899 questionnaires sent to physicians' offices, the total number of respondents was 708. Table 1 also shows that 266 of these respondents represent couple responses. Thus, for the calculation of the total response rate, 266 was removed making a response of 442 out of 899, resulting in a response rate of 49 percent. Using information from the medical marriage literature and the Oregon Medical Association, it was estimated that a good response rate would be approximately 30 percent. The majority of the response rates in the literature were not reported; in those that did 30 percent was the average rate of return. The two highest response ratings were 80 percent (Garvey and Tuason, 1979) and 52

percent (Gabbard, Menninger, and Coyne, 1987). In the Garvey and Tuason study, respondents were in the same county as the research facility, while Gabbard et al.'s respondents had been through a marital workshop conducted by the researchers. As a result it would seem that these response rates should be higher than the average, as well as having the possibility of a respondent bias. Since the present study was a state wide random sample from a "normal" population and no affiliation with the respondents, a response rate of 49 percent was considered an excellent rate of return.

Of the 442, the 266 married couples represented 60 percent of the total response rate, and 65 respondents represented either physicians or physicians' spouses whose spouses did not return the questionnaire (15%). Thirty-one physicians had never been married (7%), and thirty-seven physicians were divorced or in the process of divorcing (8%). The remaining 10 percent of the respondents were physicians not interested in participating in the study ($n = 12$, 3%), widowed physicians ($n = 3$, <1%), physicians who were retired and did not complete the questionnaire ($n = 15$, 3%), and respondents who sent in information after the deadline for data to be used ($n = 13$, 3%). The data for those respondents who were late were not used for analysis in this project, but will be used as part of further research on medical marriages.

Table 1

Response Rate

Group	<u>n</u>	Total Response Rate
All respondents	708	
Medical couples	<u>266</u>	
Total respondents	422	49%

Group	<u>n</u>	Response Rates
Paired respondents 266 x 2 =	532	60%
Non-paired respondents	65	15
Never-married physicians	31	7
Divorced physicians	37	8
Physicians not interested	12	3
Widowed physicians	3	1
Retired physicians	15	3
Respondents too late	<u>13</u>	<u>3</u>
Total	708	100%

As indicated, this population of physicians and their spouses is represented by 266 couples and 65 individual respondents who are married but whose partner did not return the questionnaire. The 266 couple responses will be referred to as "paired" respondents and the 65 individual respondents will be referred to as "non-paired" respondents.

In the marriages in which only one person responded, the respondent had a higher motivation to complete a questionnaire on medical marriages than the partner who did not respond. The reasons that the partner did not respond are, of course, unknown. There may be a difference in marital satisfaction between paired and non-paired respondents.

If only the paired data were to be used for analysis among physicians and their spouses, then the variation in marital satisfaction would be less; therefore, generalization to the larger population would be limited. By using the non-paired data with the paired data, we are able to generalize the findings to a larger population of physicians and their spouses. These medical marriages would be more inclusive of marriages with high and low marital satisfaction, and would be more representative of the total population of physicians and physicians' spouses in Oregon. Following this rationale, all analyses performed throughout the remainder of the results section use the combined

paired and non-paired data.

Measures

Marital Satisfaction

Marital satisfaction was measured using the Dyadic Adjustment Scale (DAS) (Spanier, 1976) (see Appendix F). The DAS is a 32 item, self-report measure that is completed in several minutes. Reliability and validity of the DAS has been assessed using married, divorced, separated, and cohabitating couples (Spanier, 1976; Spanier & Thompson, 1982). Non probability samples included 50 separated, 245 divorced, and 218 married persons. Cronbach's alpha for internal consistency for the DAS is .96 (Spanier, 1976).

Content validity for the DAS was assessed by three judges (Spanier, 1976); each item was judged according to whether the item was a relevant measure of dyadic adjustment for contemporary intimate relationships and consistent with the definitional criteria of adjustment as suggested by Spanier and Cole (1974) The items were worded carefully with the appropriate fixed choice responses (Spanier, 1976).

Criterion-related validity was assessed by correlating the DAS with the Locke-Wallace Marital Adjustment Scale (Locke & Wallace, 1959) ($r = .87, p < .001$) (Spanier, 1976). Each of the 32 items in the scale discriminated between the divorced and married groups at the $p < .001$ level (Spanier, 1976). Construct validity was assessed by two methods.

First, the DAS was correlated with the items from the Locke-Wallace Marital Adjustment Scale at .86 among the married sample and .88 for the divorced group($p < .001$) (Spanier, 1976). The second method used for assessing construct validity was factor analysis. Factor analysis with oblique rotation revealed four interrelated components of adjustment: dyadic satisfaction, dyadic cohesion, dyadic consensus, and affectional expression. Reliability scores were .94, .86, .90, and .73 respectively. The use of these subscales has been a controversial issue among family researchers (Busby and Crane, 1988; Sharpley and Cross, 1982). Later attempts to replicate the factor structure (Busby and Crane, 1988; Spanier & Thompson, 1982; Sharpley and Cross, 1982) on samples of divorce and separated couples suggested that the DAS is best used at a global scale and not as an assessment of consensus, satisfaction, cohesion, and affectional expression.

Work/Family Dimensions

A series of questions were developed to assess Kanter's work/family dimensions: absorption, time and timing, emotional climate, and occupational subculture. Fourteen questions were developed using a Likert-type scale (Appendix G for the physicians' scale and Appendix H for the spouses' scale) to assess both physicians' and their spouses' perceptions of the physicians' job, its impact on their marriages, and the personal life of the

physician (Table 2 lists the fourteen questions assessing Kanter's work/family dimensions). The Likert scale was developed so that low scores indicated agreement and high scores indicated disagreement with the questions. A factor analysis was computed to determine construct validity. The factor analysis will be explained in detail in the results section. Additional questions were developed that assessed physicians' spouses' employment and their impact on the families. Only spouses who were employed completed this section.

Demographic Data

Demographic information was compiled in order to accurately describe the sample (see Appendix I, questions # 1 - 13, for the physician's questionnaire and Appendix J, questions # 1 - 13, for the spouse's questionnaire) and as a means to verify that this sample has similar characteristic as those in previous studies on physicians. Use of the American Medical Association's list of medical specialties was used to assess major groupings within the medical fields. Information on age, sex, relationship status, education, income, number of children, years of current marriage, religiosity, and amount of time spent together as a couple were included. Other questions also included in the questionnaire are not addressed here. The questionnaire was piloted by 10 physicians and their spouses. Changes in the wording of five of the questions in

Table 2.

Questions Developed to Assess Physicians' Work/Family
Overlap

-
- Question 1. My job requires that my spouse do most of the work around the house.
- Question 2. My job overlaps into my personal and family life.
- Question 3. I think about my patients when I am home or involved in leisure activities.
- Question 4. I have control of my working hours.
- Question 5. I spend enough time with my spouse.
- Question 6. I am proud to tell others that I am part of this profession.
- Question 7. My spouse is proud to tell others he/she is married to a physician.
- Question 8. I use my title ("Dr.") when I give my name (when making travel arrangements, etc.).
- Question 9. Most of my personal life goals are job-oriented.
- Question 10. I am satisfied with my profession.
- Question 11. My spouse is satisfied with my profession.
- Question 12. I am satisfied with my performance as a physician.
- Question 13. I feel stress due to my job.
- Question 14. My spouse feels stress due to my job.
-

the original survey were made for clarity as a result of the pilot test.

Independent and Dependent Variables

The major dependent variable for this study is marital satisfaction of physicians and their spouses, measured by Spanier's (1976) Dyadic Adjustment Scale. One group of independent variables stems from Kanter's work/family dimensions, and concerns the developed scales tapping perceptions of job satisfaction, time control, job stress and job involvement. The last group of independent variables concerns more objective characteristics of physicians' work experiences and background (Appendix H, questions # 14 - 22, for physicians and Appendix I, questions # 14 - 25, for physicians' spouses). These variables include medical specialty, work environment, age, the number of years physicians have worked, the number of hours per week physicians work, the average hours physicians have "on-call", percentage of direct care physicians experience with their patients, and other demographic variables such as gender, years married, income, and the number of children living at home.

IV. RESULTS

The results section will be presented in the following manner. First, the sample is described in detail including demographics, such as age, length of marriage, number of children, and income. After the sample is detailed the psychometric properties of the two major measures (Dyadic Adjustment Scale and Work/Family overlap) are reported. Details on the DAS include mean scores for both physicians and their spouses as well as comparisons with Spanier's (1976) original data. A rationale for using all respondents in the analyses, not just those who represent medical marriages in which both partners completed and returned questionnaires, is presented. Following the DAS information, factor analysis results are reported on Work/Family Overlap. These results center on questions developed to assess Kanter's (1977) work/family dimensions.

The third part of the results section reports the results of hypotheses testing. The fourth and last section combines research questions one and two in order to provide a more comprehensive model of the predictability of marital satisfaction for physicians and their spouses.

Sample

The subjects for this study were 305 physicians and 292 physicians' spouses from the State of Oregon, making a total N of 597. Five hundred and thirty-two responses represent marriages where both partners completed and

returned questionnaires, totaling 266 couples. Table 3 gives a detailed description of physicians' and physicians' spouses' demographic information, showing that 305 married physicians and 292 physicians spouses were included in the total sample. Of the 292 spouses, 189 were employed and 100 were not. Physicians ranged in age from 27 to 82 with a mean age of 46; spouses ranged in age from 21 to 83 with a mean on age of 43. Physicians reported having been married an average of 18 years with a range from less than 1 year to 60 years. The physicians' spouses reported an average of 17 years of marriage with a range from less than 1 year to 56 years. The average number of children physicians and their spouses had was 2.6, while the average number living at home was 1.4. Differences in these numbers were attributed not only to couples with no children and couples where the children had left home, but also to physicians who had remarried and had step-children as well as children in the custody of the ex-spouse. Spouses' educational level averaged 17 years with a range from 8 - 28 years.

Table 3

Characteristics of the Sample

	<u>n</u>	% of total sample
Married physicians responded	305	51
Physicians' spouses responded	<u>292</u>	<u>49</u>
Total	597	100
Employed spouses	189	65
Nonemployed spouses	<u>100</u>	<u>35</u>
Total	289*	100

Demographics	Mean	Range
Physicians' age	46	27 - 82
Spouses' age	43	21 - 83
Physicians' years married	18	1 - 60
Spouses' years married	17	1 - 56
Number of children	2.6	0 - 12
Number of children at home	1.4	0 - 8
Spouses' education	17	8 - 28

*Three spouses did not indicate employment status; thus, the total number of employed versus nonemployed spouses does not match the overall spouses total.

Income was separated into two categories, that from physicians and that from physicians' spouses. Table 4 shows the the number of physicians and physicians' spouses within each income category. The median category for physicians was between \$80,000 to \$120,00, while the median income category for spouses was less than \$20,000.

Information on the gender difference between physicians and physicians' spouses is located on Table 5. This information indicated male physicians numbered 273 while only 31 respondents were female physicians. Questionnaires returned from physicians' spouses numbered 26 males spouses and 263 female spouses. The results totaled 299 males and 294 females in the total sample. Thus, physicians' data in this study come predominantly from males and physicians' spouses data predominantly reflect data from females.

Table 4

Income of Physicians and Their Spouses

Physicians	Spouses	Income Categories
5	100	less than \$20,000
36	89	\$20,000 - \$40,000
20	61	\$40,000 - \$60,000
37	8	\$60,000 - \$80,000
48	4	\$80,000 - \$100,000
49	6	\$100,000 - \$120,000
29	0	\$120,000 - \$140,000
23	1	\$140,000 - \$160,000
9	0	\$160,000 - \$180,000
12	1	\$180,000 - \$200,000
34	2	above \$200,000
<hr/> Total 302	<hr/> 280	

Table 5

Gender of Physicians and Spouses

	Male	Female	Total
Physicians	273	31	304
Spouses	26	263	289
Total	299	294	*593

*1 physician and 3 spouses (all non-paired respondents)
had missing information on gender.

Mean scores and standard deviations on the Dyadic Adjustment Scale (DAS) are reported in Table 6. T-tests indicated that there were no significant differences between mean scores for males and females. Therefore, analyses will include both between males and females; the sample will be separated into physicians and physicians' spouses.

It is particularly interesting to note that this population of physicians and their spouses reported marital satisfaction scores on the DAS similar to Spanier's (1976) original sample mean scores. As shown in Table 6, Spanier reported that married people had mean scores of 114.8 with a standard deviation of 17.8. Table 6 shows that the overall mean for physicians and their spouses is 114.4 with a standard deviation of 15.07. Using a formula to calculate t-tests between two separate research samples (Cozby, 1989), the t-value equaled 0.32. Using a T distribution scale located in Hinkle, Wiersma, and Jurs (1979) no significance was found between Spanier's sample and this sample of physicians and their spouses.

Spanier (1977) did not indicate differences in mean scores between males among different occupations or between males and females, whereas Table 6 shows males had mean scores of 114.7 with a standard deviation of 13.8, and females had a mean of 113.9 with a standard deviation of 16.2.

Table 6

Scores on the Dyadic Adjustment Scale

DAS Grouping	<u>n</u>	Mean	Stand. Dev.	<u>df</u>	t Value	Prob.
Spanier's (1976) sample	218	114.8	17.8		0.32	*NS
Total (physicians and spouses)	558	114.36	15.071			
Physicians	288	115.11	14.302	555	0.95	.34
Spouses	270	113.56	15.838			
Males	283	114.72	13.871	552	-0.35	.72
Females	271	114.29	14.936			
Male physicians	257	114.53	14.309	285	1.81	.07
Female physicians	30	119.50	13.518			
Male spouses	26	116.65	8.318	265	-1.00	.31
Female spouses	242	113.21	16.440			

Note: No differences existed between males & females, physicians and spouses, or group listed here and the sample on which the DAS was normed, according to a series of t-tests, $p > .01$ or $.05$.

*No significance.

Marital Satisfaction in Paired and Non-Paired Data

As indicated previously, physicians and their spouses are represented by 266 paired couples and 65 non-paired respondents. Paired respondents refers to the fact that both physician and spouse returned surveys, for non-paired respondents, only one marital partner completed the survey. With such a large response of paired data compared to non-paired data, two-tailed t-tests were run to see if differences in marital satisfaction exist between these two groups in marital satisfaction. A t-test analyzes if two sample means are significantly different from each other (Nie et al., 1975). Table 7 shows that the t-test revealed significant differences between the two groups ($t = 2.57$, $df = 2.57$, $p = .01$), with paired DAS mean scores being 115.1 (standard deviation = 14.1) and non-paired DAS mean scores being 109.9 (standard deviation = 16.2).

Further investigation showed that there were no significant differences between the physicians in the paired group (physicians whose marital partners also returned questionnaires) and physicians in the non-paired group (physicians whose partners did not return questionnaires). However, t-tests on the spouses of physicians showed significant differences between the two groups ($t = 2.11$, $p = .03$), with DAS mean scores of paired physicians' spouses being 114.5 (standard deviation = 14.4) and non-paired physicians' spouses reporting means of 107.6

Table 7

Differences Between Paired and Non-Paired Physicians and Spouses on the Dyadic Adjustment Scale

Group	<u>n</u>	Mean	D.F.	T-values
Paired	499	115.10	554	2.57*
Non-paired	57	109.94		
Paired physicians	252	115.65	286	1.71
Non-paired physicians	36	111.30		
Paired spouses	247	114.53	266	2.11**
Non-paired spouses	21	107.61		

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

(standard deviation = 41.6). Because non-paired respondents were significantly lower in marital satisfaction, the primary dependent variable of the study, a rationale for including non-paired respondents exists, in order to maximize variation in marital satisfaction.

Work/Family Overlap and Marital Satisfaction

Research Question One investigated the extent to which physicians' and spouses' perceptions of work/family overlap were associated with marital satisfaction. Before research question one could be addressed, a psychometric analysis of the scale developed to assess the dimensions of work/family overlap had to be performed.

Scale Development of Work/Family Overlap

A factor analysis was used to evaluate the fourteen questions addressing Kanter's work/family dimensions (Appendix G). Factor analysis determines which questions can be considered together as factors explaining variance in the overall test (Kass and Tinsley, 1979; Kerlinger, 1973). An orthogonal factor analysis with varimax rotation was used to assess the different dimensions the questions were designed to address. Factors were included only when the eigenvalues were higher than 1.0; all items had factor loadings of .40 or more (Kass and Tinsley, 1979). Table 8 shows the factor loadings for each of the fourteen questions and the eigenvalue for each of the factors.

Question 7 loaded on factor 1 with a loading of 0.612

and on factor 3 with a loading of 0.338. Question 8 loaded on factor 2 with a loading of 0.394 and in factor 4 with a loading of 0.642. Although each question loaded on more than one factor, the lower loadings were less than 0.40 and thus were not be considered for that factor. Therefore, it was determined that question 7 stay in factor 1 and not in factor 3. Similarly, question 8 remained part of factor 4 instead of factor 2. Question 3 (I think about my patients when I am at home or involved in leisure activities.) did not have a factor loading higher than 0.40 on any factor. This item was dropped from further analyses.

Using the formula introduced by Kass and Tinsley (1979), factor 1 (questions 10, 11, 6, 12, & 7) accounts for 34.2% (eigenvalue = 2.806) of the total work/family scale variance, factor 2 (questions 4, 5, & 2) explains 24.0% (eigenvalue = 1.975) of the variance, factor 3 (questions 13 & 14) explains 22.4% (eigenvalue = 1.841), and factor 4 (questions 9, 8, and 1) explains 19.4% (eigenvalue = 1.590) of the variance.

Table 8 also shows the alpha reliability of each of the four work/family factors. Using a formula introduced by Kim and Mueller (1978), factor 1's reliability score was .79. Factor 2's alpha was .48, while factor 3's equaled .54. Factor 4 had the lowest alpha score (.45).

Factor Loadings on Work/Family Dimensions

Question #	Factors			
	(1) Satisfaction	(2) Time	(3) Stress	(4) Involvement
10	0.825			
11	0.785			
6	0.725			
12	0.700			
7	0.612			
4		0.769		
5		0.741		
2		0.612		0.275
13			0.872	
14			0.858	
9				0.748
8		0.394		0.642
1				0.576
3		-0.338		0.323
<hr/>				
Eigenvalues	2.806	1.975	1.841	1.590
Alpha =	.79	.48	.54	.45

Note: The above Factor Loading Matrix has been rearranged so that the columns appear in decreasing order of variance explained by factors. The rows have been rearranged so that for each successive factor, loadings greater than 0.5000 appear first. Loadings of less than 0.2500 are not specified.

Each of the 4 factors was labeled to describe the characteristics of the questions used in that factor. Table 9 shows each of those four areas and the questions associated with them. (The questions are listed in the form of the physicians' scale. Appendix H shows how the items were worded for physicians' spouses). Factor 1 best describes Kanter's work/family dimension of Occupational Subculture, dealing with pride, performance, and satisfaction as a physician. This factor was named "Satisfaction". Items loading on Factor 2 were closely related to Kanter's dimension of Time and Timing, dealing with the amount of control physicians had of the time spent working. This factor was named, "Time". Items loading on factor 3 relate to Kanter's area of the Emotional Climate of physicians' work. Because these items deal with the stress of physicians' work, this factor is called "Stress". Items loading on the last factor, factor 4, approach what Kanter called Work Absorption. These items tap the extent to which physicians' work roles involve identity, goals, and family patterns. This factor was named "Involvement". It should be remembered that although these scales are simply called satisfaction, time, stress, and involvement, they are derived from physicians and physicians' spouses perception of this particular occupation and may not be applicable to other occupations.

Work/Family Factors

Factor 1: Satisfaction

- Question 10 I am satisfied with my profession.
Question 11 My spouse is satisfied with my profession.
Question 6 I am proud to tell others that I am part of this profession.
Question 12 I am satisfied with my performance as a physician.
Question 7 My spouse is proud to tell others he/she is a physician.

Factor 2: Time

- Question 4 I have control of my working hours.
Question 5 I spend enough time with my spouse.
Question 2 My job overlaps into my personal and family life.

Factor 3: Stress

- Question 13 I feel stress due to my job.
Question 14 My spouse feels stress due to my job.

Factor 4: Involvement

- Question 9 Most of my personal life goals are job-oriented.
Question 8 I use my title ("Dr.") when I give my name (making travel arrangements, etc.)
Question 1 My job requires that my spouse do most of the work around the house.
-

Table 10 presents means, standard deviations, n 's, and probabilities for each of the four work/family dimensions for physicians and physicians' spouses. Comparisons show physicians and their spouses are different on three of the four work/family dimensions. As mentioned in the methodology section, the lower the factor score, the more the respondent agreed with the factor and the higher the factor scores, the more the disagreement. Therefore, physicians' spouses perceived physicians' work satisfaction to be significantly higher than physicians perceived work satisfaction. Specifically, physicians' mean score was 9.918 with a standard deviation of 3.730, and spouses' mean was 9.110 with a standard deviation of 3.240 ($df = 573$, $t = 2.77$, $p = .005$). The Time factor was the only dimension with no differences between physicians and their spouses. Physicians' mean Stress score of 3.874 with a standard deviation of 1.724, and spouses' mean score of 4.545 with a standard deviation of 2.033, indicated that physicians perceived their work to be more stressful to both themselves and their spouses than their spouses' perceived to be ($p = .0001$, $df = 586$, $t = -4.32$). Physicians' spouses also perceived physicians to be more involved with their work than the physicians perceived. Physicians had a mean of 9.681 (standard deviation = 2.743) and physicians' spouses mean was 8.912 (standard deviation = 2.968, $df = 581$, $t = 3.25$, $p = .001$).

Table 10

Physicians' and Spouses' Mean Factor Scores

Work/Family Dimension	Group	<u>n</u>	Mean Score	Standard Deviation	DF	T Value	Prob- ability
Satisfaction	Physicians	295	9.918	3.730	573	2.77	.005
	Spouses	280	9.110	3.240			
Time	Physicians	296	7.787	2.175	576	1.55	.121
	Spouses	282	7.517	1.996			
Stress	Physicians	296	3.874	1.724	586	-4.32	.000
	Spouses	286	4.545	2.033			
Involvement	Physicians	298	9.681	2.743	581	3.25	.001
	Spouses	285	8.912	2.968			

Work/Family Overlap and Marital Satisfaction.

Two research questions were asked to ascertain specific aspects of physicians' work/family overlap. The first research question considered how various areas of the perceived work/family overlap are related to physicians and physicians' spouses' marital satisfaction. Four hypotheses examined how the association of the four areas of physicians' work satisfaction, time, stress, and involvement (the factors tapping aspects of work/family overlap) and physicians and physicians' spouses' marital satisfaction. Table 11 shows the correlations of each of the four work/family dimensions with the Dyadic Adjustment Scale and with each factor. For physicians, the Dyadic Adjustment Scale was significantly correlated with their work satisfaction ($p < .05$); physicians' work satisfaction also was significantly correlated with physicians' time control ($p < .05$). For physicians' spouses these were 6 significant correlations: DAS with physicians' work satisfaction ($p < .01$); physicians' work satisfaction and physicians' time control ($p < .01$); DAS and stress ($p < .05$); physicians work satisfaction and stress ($p < .01$); time control and stress ($p < .05$); and DAS with physicians' work involvement.

Table 11

Simple Correlations Between DAS and Factor Scores

	DAS	Satisfaction	Time	Stress	Involvement
Physicians' Correlation Matrix					
DAS	1.00				
Satisfaction	-0.22*	1.00			
Time	-0.13	0.20*	1.00		
Stress	0.01	-0.04	-0.16	1.00	
Involvement	-0.08	0.18	0.01	-0.02	1.00
Physicians' Spouses' Correlation Matrix					
DAS	1.00				
Satisfaction	-0.32**	1.00			
Time	-0.07	0.27**	1.00		
Stress	0.22*	-0.34**	0.21*	1.00	
Involvement	0.19*	0.15	0.03	0.16	1.00

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

Note: Critical Values of the Correlation Coefficient located in Hinkle, D. E., Wiersma, W., & Jurs, S.G. (1979), Applied Statistics for the Behavioral Sciences.

Step-wise multiple regression analyses were performed to indicate the extent to which each of the factors listed in research question 1 impacts physicians' and their spouses' marital satisfaction. As well, step-wise multiple regression allows for development of a model that explains marital satisfaction in medical marriages. Because the purpose of this study was to analyze how aspects of Kanter's work/family dimensions impact marital satisfaction, as well as how physicians' work-related demographics influence marital satisfaction, three steps were used to build a comprehensive model. First, step-wise regressions were used to analyze the work/family dimensions independently of any other variables. The same procedure was used with the work-related demographics in research question two. These first two steps were necessary in order to answer research questions one and two. Finally, step-wise regressions was used to combine all the variables in the two research questions for a more complete marital satisfaction model for physicians and their spouses.

In these analyses, marital satisfaction was the dependent variable, with the four areas of work/family dimensions being the independent variables. Separate models were constructed for physicians' and physicians' spouses' marital satisfaction. The physicians' model reported the physicians' perceptions of work/family overlap and marital satisfaction, while the physicians' spouses'

model reported the spouses' perception of work/family overlap and marital satisfaction.

Table 12 shows that the step-wise regression with physicians' marital satisfaction as the dependent variable, physicians work satisfaction (factor 1) significantly predicted physicians' marital satisfaction (Multiple $R = 0.0517$, $F = 13.86$, $df = 1$, $p < 0.01$), with a negative beta weight of -0.8907 , indicating that the higher work satisfaction, the higher the marital satisfaction. The other three factors (time, stress, and involvement) did not enter into the step-wise multiple regression model. For physicians, therefore, hypothesis 1 was supported while hypotheses 2, 3, 4, were not.

The step-wise multiple regression on the marital satisfaction of physicians' spouses on Table 12 indicated Satisfaction (factor 1) and Involvement (factor 4) significantly predicted physicians' spouses marital satisfaction (Multiple R-Square = 0.1615 , $F = 24.47$, $df = 2$, $p < 0.01$). The beta weight for Satisfaction had a negative direction (-1.7273), while involvement's direction was positive (1.3270). Spouses who perceive that physicians were more satisfied with work had higher marital satisfaction. However, the more involved physicians were in their work, the lower spouses' marital satisfaction. Thus, for physicians' spouses, hypotheses 1 and 4 were supported, hypotheses 2 and 3 were not.

Table 12

Regression of Marital Satisfaction Onto Work/FamilyDimensions

Predictor Variables	<u>n</u>	Beta Weights	Multiple R-Square	DF	F Ratio	P Value
Physicians' Marital Satisfaction						
Satisfaction	256	-0.8907	0.0517	254	13.86	.01
Physicians' Spouses' Marital Satisfaction						
Satisfaction	257	-1.7273	0.1615	254	24.47	.01
Involvement		1.3270				

Analysis of Work and Family Demographics

Research question 2 was designed to evaluate how objective aspects of the physicians' job, the physicians' family, and the physicians' individual demographics relate to the marital satisfaction of physicians and physicians' spouses. Four hypotheses (hypotheses 5, 6, 7, and 8) tested whether the demographic variables of number of hours physicians work, physicians' work settings, physicians' medical specialties, the age of physicians, and the age of physicians' spouses were associated with marital satisfaction.

Some of the variables involved in these hypotheses were continuous and others were categorical. The continuous variables were age, number of years married, number of children at home, number of years physicians have worked, average number of hours per week physicians work, average number of hours per week the physician is "on call", and the percentage of time physicians spend in direct patient care. Gender was used as a dummy variable in order to be used in the regression model. The categorical variables were the physicians' medical specialties and physicians' work environment (hospital setting, clinical setting, or solo practice).

Table 13 shows the correlations among the continuous variables and the Dyadic Adjustment Scale and with each other for physicians; Table 14 shows the same correlations

for physicians' spouses. Clearly many of the job, individual, and family demographics are inter-related. Note that these background factors for both for physicians and for physicians' spouses are not significantly correlated with the Dyadic Adjustment Scale.

Table 13

Simple Correlations Among Demographic Variables and DAS for Physicians

	DAS	Age	Gender	Years Married	# of Child.	# of Child. Home	Years Worked	Hours Worked	On-Call Hours	% of Direct Care
DAS	1.00									
Age	0.06	1.00								
Gender	-0.07	0.25**	1.00							
Yrs. Married	0.03	0.77**	0.23*	1.00						
# Children	0.01	0.51**	0.24*	0.30**	1.00					
# Children at Home	-0.06	-0.33**	0.09	-0.25**	0.38**	1.00				
Yrs. Worked	0.04	0.96**	0.25**	0.74**	0.51**	-0.33**	1.00			
Hrs. Worked	0.01	-0.37**	0.04	-0.29**	-0.11	0.18	-0.35**	1.00		
"On-Call" hours	-0.07	-0.04	0.06	-0.04	0.08	0.17	-0.04	0.30**	1.00	
% direct care	-0.05	-0.22*	0.07	-0.16	0.01	0.13	-0.20**	0.27**	0.20*	1.00

* $p < .05$. ** $p < .01$. Critical Values of the Correlation Coefficient located in Hinkle, D. E., Wiersma, W., & Jurs, S. G. (1979), Applied Statistics for the Behavioral Sciences.

Table 14

Simple Correlations Among Demographic Variables and DAS for Physicians' Spouses

	DAS	Age	Gender	Years Married	# of Child.	# of Child. Home	Years Worked	Hours Worked	On-Call Hours	% of Direct Care
DAS	1.00									
Age	-0.03	1.00								
Gender	0.06	-0.12	1.00							
Yrs. Marr.	-0.04	0.85**	-0.23*	1.00						
# Children	-0.07	0.41**	-0.23*	0.37**	1.00					
# Children at Home	-0.05	-0.33**	-0.09	-0.20**	0.42**	1.00				
Yrs. Worked	-0.11	0.81**	-0.22**	0.72**	0.39**	-0.35**	1.00			
Hrs. Worked	0.09	-0.25**	-0.10	-0.19**	-0.02	0.09	-0.23**	1.00		
"On-Call" Hours	-0.08	-0.02	-0.07	-0.03	0.16	0.15	0.12	0.29**	1.00	
% Direct Care	-0.06	0.07	0.00	0.04	0.00	-0.01	0.16	-0.06	-0.14	1.00

* $p < .05$. ** $p < .01$. Critical Values of the Correlation Coefficient located in Hinkle, D. E.,

Wiersma, W., & Jurs, S. G. (1979), Applied Statistics for the Behavioral Sciences.

The continuous variables shown in Tables 13 and 14 were submitted to a step-wise multiple regression with marital satisfaction as the dependent variable, to test hypotheses 5 and 8. Hypothesis 5 investigates the average amount of hours physicians work per week and Hypothesis 8 investigates the ages of both physicians and physicians' spouses. The step-wise regression models for physicians' marital satisfaction and physicians' spouses marital satisfaction indicated that the demographic continuous variables (i.e. neither age, gender, years married, number of children, number of children at home, years worked, hours worked, "on-call" hours, and percentage of direct patient care) were not significant predictors of marital satisfaction for physicians or physicians' spouses. No model emerged. Hypotheses 5 and 8 were not supported by the step-wise model.

In addition to step-wise regression analyses, ANOVAs were used to assist in answering research question 2. Separate ANOVAs were performed on the categorical variables with marital satisfaction as the dependent variable and each categorical variable (i.e., medical specialty and work setting) as independent variables. As well, the variables of average hours per week physicians work and ages of physicians and their spouses were changed to categorical variables as a result of the literature review on medical marriages. This literature on medical marriages suggested

that at certain stages, these variables affected medical marriages. The literature suggests that the more hours per week physicians work (between 60 to 80 hours), the less marital satisfaction will be experienced by physicians and their spouses. The literature suggested similar ideas with the age of physicians, hinting that physicians who are middle aged (35 -45) will have lower marital satisfaction than their colleagues who are either older or younger.

The average hours per week physicians work were broken into five categories: less than 40 hours per week, 41 through 50 hours, 51 through 60 hours, 61 through 70 hours, and those who worked over 70 hours per week. The ANOVA summary in Table 15 shows that there are no significant differences in marital satisfaction among physicians who work different numbers of hours per week. Similar results are also shown on Table 15 for physicians' spouses marital satisfaction. These findings do not support hypothesis 5.

Table 15

Impact of Physicians' Working Hours on Marital Satisfaction

Work Hours	<u>n</u>	DAS Means	Standard Deviation	DF	F	Probability
Physicians' Marital Satisfaction						
Under 40	51	115.67	17.60	4	0.98	.4213
41 - 50	63	113.53	12.19			
51 - 60	91	115.74	13.65			
61 - 70	36	113.25	12.88			
Over 70	35	118.77	15.13			
Total	276	115.28				
Physicians' Spouses' Marital Satisfaction						
Under 40	47	109.53	22.07	4	1.76	.1375
41 - 50	58	113.62	13.94			
51 - 60	68	112.58	15.09			
61 - 70	43	118.25	13.69			
Over 70	42	114.30	13.93			
Total	237	113.99				

Hypothesis 6 dealt with the different types of working environments of physicians. These environments were hospitals, clinics, solo practices, teaching facilities, and "other". An ANOVA was performed with marital satisfaction as the dependent variable. The results in Table 16 indicated no significant differences between the groups on marital satisfaction of physicians or their spouses. Thus, hypothesis 6 was not supported.

Hypothesis 7 referred to the different kinds of medical specialties and whether there are differences in marital satisfaction among them. Data were collected on twenty three different medical specialties, but due to limits on computer software these groups were combined into 10 different types of medical specialties (see Appendix K). Medical specialties were combined with other specialties by similarities in training and education, not by specific demographics such as number of on-call hours. Specialties were combined in this manner due to the large varieties in the demographic variables, such as on-call hours. Tables 17 and 18 show that separate ANOVAs on marital satisfaction of physicians and their spouses show no differences among medical specialties in marital satisfaction. Hypothesis 7 was not supported by the findings.

Table 16

Impact of Physicians' Working Environment on Marital
Satisfaction

Working Environment	<u>n</u>	DAS Means	Standard Deviation	DF	F	Probability
Physicians' Marital Satisfaction						
Hospital	57	116.14	12.13	4	0.09	.9865
Private Practice	93	115.04	14.28			
Group Practice	82	114.73	15.28			
Teaching Facility	35	115.05	15.71			
"Other"	20	115.30	16.17			
Total	287	115.19				
Physicians' Spouses' Marital Satisfaction						
Hospital	56	116.21	13.82	4	1.52	.1844
Private Practice	78	110.07	20.53			
Group Practice	84	114.36	12.86			
Teaching Facility	29	113.51	12.48			
"Other"	19	117.11	15.24			
Total	266	113.66				

Table 17

Impact of Medical Specialty on Physicians' Marital Satisfaction

Specialty	<u>n</u>	DAS Means	Standard Deviation	DF	F	Probability
Anesthesiology	16	111.93	13.58	9	1.57	.1232
Emergency Medicine	15	118.13	9.83			
Family/General Practice	56	115.71	12.71			
Internal Medicine	68	115.75	14.88			
OBGYN	21	117.80	9.38			
Pediatrics	19	115.15	18.84			
Psychiatry	14	111.78	12.21			
Radiology	12	108.75	18.13			
Surgery	47	118.31	13.93			
"Other"	20	107.30	16.79			
Total	288	115.11				

Table 18

Impact of Medical Specialty on Spouses' Marital Satisfaction

Specialty	<u>n</u>	DAS Means	Standard Deviation	DF	F	Probability
Anesthesiology	15	119.40	13.22	9	0.84	.5810
Emergency Medicine	12	115.08	13.78			
Family/General Practice	51	113.11	13.88			
Internal Medicine	56	115.14	12.94			
OBGYN	21	110.76	15.73			
Pediatrics	16	107.75	30.54			
Psychiatry	12	110.83	13.73			
Radiology	12	111.50	15.58			
Surgery	42	115.95	16.01			
"Other"	18	110.88	15.55			
Total	255	113.61				

The last hypothesis, hypothesis 8, investigated the impact of physicians' age on marital satisfaction, and physicians' spouses' age on marital satisfaction. Age was broken into the following categories: those younger than 35, 35 - 45, 46 - 65, and older than 65 years. The ANOVA in Table 19 indicated that there were significant differences among the different age groups in marital satisfaction for physicians ($F = 2.93$, $df = 3$, $p = 0.034$). Least Significant Differences (LSD) were used as Post Hoc tests for both physicians and their spouses. LSD was used due to the large size differences among the categories. These Post Hoc tests ($p = .05$) revealed the following: Physicians between the ages of 35 - 45 years old had significantly lower marital satisfaction than physicians who were younger than 35; physicians between the ages of 35 - 45 also had significantly lower marital satisfaction than physicians who were between the ages of 45 - 65 years old. Table 19 also shows similar findings for physicians' spouses' marital satisfaction ($F = 2.59$, $df = 3$, $p = 0.05$). Post Hoc tests ($p = .05$) for physicians' spouses' revealed: Spouses between the ages of 35 - 45 had significantly lower marital satisfaction than spouses younger than 35; spouses between the ages of 46 - 65 had significantly lower marital satisfaction than spouses younger than 35; finally, spouses between the ages of 46 - 65 had significantly lower marital satisfaction than

Table 19

Impact of Age on Marital Satisfaction

Age	<u>n</u>	DAS Means	Standard Deviation	DF	F	Probability
Physicians' Marital Satisfaction						
Below 35	47	118.80	11.35	3	2.93	.03
35 - 45	114	112.28	13.66			
46 - 65	111	115.85	15.60			
Above 65	14	118.42	14.65			
Total	286	115.04				
Spouses' Marital Satisfaction						
Below 35	45	118.22	11.2]	3	2.59	.05
35 - 45	140	112.83	14.69			
46 - 65	77	111.63	19.49			
Above 65	6	123.50	13.66			
Total	268	113.63				

spouses older than age 65. These findings, concerning both physicians and their spouses, support hypothesis 8.

A Regression Model of the Components of Marital Satisfaction for Medical Marriages

In order to understand more clearly the impact of medical marriages and marital satisfaction, this portion of the data analysis was an effort to establish a comprehensive model of marital satisfaction using all the variables from research questions 1 and 2. The literature on medical marriages strongly suggested differences in marital satisfaction depending on physicians' working hours, medical specialty, working environment, age of physician and age of physicians' spouse. The results showed that the only variables to impact marital satisfaction for physicians were work satisfaction and age. For spouses, the only variables impacting marital satisfaction were physicians' work satisfaction, physicians' work involvement and spouses age. Either the remaining variables are not associated with marital satisfaction or the specific variables that could affect marital satisfaction within these categories have not been tapped. Perhaps the combination of the perceptions of physicians' work/family overlap and physicians' demographics together influence marital satisfaction rather than each area individually.

Simple correlations and a step-wise multiple

regression were used to create a model predicting marital satisfaction in physicians and spouses. Table 20 shows the simple correlations of work/family overlap and demographic variables for physicians. While many of the demographic variables are correlated with each other, certain correlations are of special interest to this study. For example, only one variable (work satisfaction) was significantly correlated with the Dyadic Adjustment Scale. Recalling that the way the questions for the work/family dimensions were designed, negative correlations means increases in the corresponding variable, and positive correlations indicate decreases in the corresponding variable. Thus, as physicians' work satisfaction increases so does marital satisfaction.

Additionally, using this combined model, it is of interest to note which work/family variables are correlated with the demographic variables. For example, time control is significantly correlated with age, number of years worked, and number of hours worked by the physician. The direction of these correlations indicated that as age and years worked increase the physicians' time control also increases, and as hours of work increases physicians perceive less time control. Stress was also correlated with these variables only in the opposite directions. As age and years worked increased, stress decreased, and as hours worked increased so did the stress. These

Table 20

Simple Correlations Among DAS, Job/Work Overlap, and Demographic Variables for Physicians

	DAS	Satis	Time	Stress	Involv	Age	Gender	Yrs Marr	# Child	# Child Home	Yrs Wkd	Hrs Wkd	Call Hrs	%Dir Care
DAS	1.00													
Satis	-0.22**	1.00												
Time	-0.13	0.20*	1.00											
Stress	0.01	-0.13	-0.16	1.00										
Involv	-0.08	0.18	0.01	-0.02	1.00									
Age	0.03	-0.13	-0.24*	0.23*	-0.40**	1.00								
Gender	0.08	-0.03	-0.05	-0.08	0.26**	-0.25**	1.00							
Yrs Mar	0.01	-0.02	-0.17	0.15	-0.34**	0.75**	0.04	1.00						
# Child	0.01	-0.01	-0.10	0.15	-0.28**	0.52**	-0.23*	0.30**	1.00					
# Child Home	-0.05	0.18	0.14	-0.07	0.02	-0.30**	-0.10	-0.22**	0.39**	1.00				
Yrs Wkd	0.01	-0.11	-0.24*	0.23*	-0.40**	0.95**	-0.25**	0.72**	0.51**	-0.31**	1.00			
Hrs Wkd	0.01	-0.01	0.26**	-0.23*	-0.10	-0.33**	-0.05	-0.25**	-0.10	0.16	-0.30**	1.00		
Call Hrs	-0.07	0.11	-0.01	-0.12	-0.13	-0.01	-0.07	-0.02	0.08	0.15	-0.01	0.29**	1.00	
%Dir Cr	-0.04	0.08	0.08	-0.14	0.01	-0.22**	-0.07	-0.16	-0.01	0.13	-0.20*	0.26**	0.20*	1.00

*p < .05. **p < .01. Critical Values of the Correlation Coefficient located in Hinkle, D. E., Wiersma, W., & Jurs, S. G. (1979), Applied Statistics for the Behavioral Sciences.

correlations showed that as age, years married, number of children, number of children at home, and years worked increased, physicians' work involvement also increased. The correlations indicated that male physicians were more involved with their work than female physicians.

Table 21 is a correlation matrix of demographic and work/family variables for physicians' spouses. As spouses' perception of physicians' work satisfaction increased, so did physicians' spouses' marital satisfaction. When spouses' perception of physicians' stress or work involvement decreased, physicians' spouses' marital satisfaction increased. Work satisfaction was not significantly correlated with any demographic variables. Spouses' who were older, married longer, and whose physician spouse worked more years saw the physicians as having more time control. Stress was significantly correlated with more children, more children at home, and greater number of physicians' work hours. Spouses perceived that physicians' work involvement increased with age, years married, number of years physicians worked, and the number of hours physicians' worked per week.

Table 21

Simple Correlations Among DAS, Job/Work Overlap, and Demographic Variables for Physicians' Spouses

	DAS	Satis	Time	Stress	Involv	Age	Gender	Yrs Marr	# Child	# Child Home	Yrs Wkd	Hrs Wkd	Call Hrs	%Dir Care
DAS	1.00													
Satis	-0.36**	1.00												
Time	-0.09	0.29**	1.00											
Stress	0.21*	-0.34**	-0.21*	1.00										
Involv	0.22*	0.09	0.01	0.25**	1.00									
Age	-0.05	-0.17	-0.20*	0.18	-0.25**	1.00								
Gender	-0.06	0.06	-0.06	-0.05	-0.16	0.12	1.00							
Yrs Mar	-0.04	-0.11	-0.21**	0.11	-0.26**	0.85**	0.23*	1.00						
# Child	-0.04	0.17	0.18	-0.26**	0.09	-0.32**	0.09	0.37**	1.00					
# Child Home	-0.05	0.17	0.18	-0.26**	0.09	-0.32**	0.09	-0.21*	0.43**	1.00				
Yrs Wkd	-0.10	-0.18	-0.30**	0.17	-0.25**	0.81**	0.22*	0.73**	0.38**	-0.34**	1.00			
Hrs Wkd	0.09	-0.01	0.16	-0.25**	-0.19*	-0.24*	0.10	-0.50**	-0.01	0.08	-0.22*	1.00		
Call Hrs	-0.07	0.05	0.06	-0.17	-0.17	-0.02	0.07	-0.02	0.14	0.14	0.01	0.32**	1.00	
%Dir Cr	0.10	0.03	0.05	-0.15	0.06	-0.20*	-0.03	-0.14	-0.03	0.05	-0.24*	0.19*	0.17	1.00

* $p < .05$. ** $p < .01$. Critical Values of the Correlation Coefficient located in Hinkle, D. E., Wiersma, W., & Jurs, S. G. (1979), Applied Statistics for the Behavioral Sciences.

Using all continuous variables as a total model of marital satisfaction for medical marriages (combining both demographics and work/family dimensions) the step-wise regressions shown on Table 22 indicated that the same predictor of marital satisfaction for physicians that was found in research question 1: work satisfaction ($n = 259$, Multiple $R = 0.05$, $F = 13.22$, $df = 257$, $p < 0.01$, $\beta = -0.8685$). Physicians with higher work satisfaction had higher marital satisfaction.

Table 22 also shows that three variables were found to predict marital satisfaction among physicians' spouses using the step-wise multiple regression. These variables were: satisfaction, involvement, and the average hours per week physicians work. These variables explained over twenty percent of the variance in marital satisfaction among physicians' spouses ($n = 217$, Multiple $R = 0.2185$, $F = 19.85$, $df = 3$, $p < .01$). The higher spouses perceived physicians' work satisfaction to be, the higher their own marital satisfaction. The less spouses perceived physicians' work involvement to be, and the fewer hours physicians worked, the higher the spouses' marital satisfaction.

This total model of marital satisfaction for physicians and their spouses demonstrates the importance of physicians' work satisfaction both for their own and their spouses' marital satisfaction. The interest in

Table 22

Regression Model of Marital Satisfaction

Predictor Variable(s)	<u>n</u>	Beta Weights	Multiple R-Square	DF	F Ratio	P Value
Physicians						
Work Satisfaction	259	-0.8685	0.05	257	13.22	.01
Physicians' Spouses						
Work Satisfaction	217	-1.8183	0.22	214	19.85	.01
Work Involvement		1.5421				
Hours Worked		0.1256				

understanding the dynamics of marital satisfaction necessitated another look at research question 2. There were no significant differences among physicians who worked different amounts of hours per week, worked in different settings, and had different medical specialties. The lack of mean differences does not, however, signify that the same variables are associated with marital satisfaction of physicians and their spouses within each of the categories. For example, physicians who work between 51 - 60 hours per week and physicians who work 61 - 70 hours per week may report similar marital satisfaction scores, but for those physicians who work 51 - 60 hours, marital satisfaction may be more influenced by their job satisfaction while the marital satisfaction of physicians who work 61 - 70 may be more influenced by their amount of "on-call" hours.

Step-wise multiple regressions were used to analyze each category of physicians' work hours, work environment, medical specialty, and the ages for physicians and their spouses. Marital satisfaction was the dependent variable while satisfaction, time, stress, involvement, age, gender, years married, number of children, number of children at home, number of years physicians have worked, amount of hours physicians work per week, average on-call hours, and the percentage of direct patient care were the independent variables. These analyses seek to explain what may account for marital satisfaction within each background category.

Marital Satisfaction for Categories of
Physicians' Work Hours

Physicians' Marital Satisfaction

Step-wise multiple regression was used for each of the five categories of average hours per week physicians work. These categories were: less than 40 hours per week, 40 - 50, 51 - 60, 61 - 70, and more than 70 hours per week. Table 23 reports the regression results for each of the hours per week worked categories. Each category will be explained briefly, then summarized in Table 23 as a group.

Stepwise multiple regression for physicians who worked less than 40 hours per week was not calculated due to the small number of physicians in the group. The model of marital satisfaction for physicians whose work hours per week averaged between 40 to 50 hours indicated that physicians' work involvement accounts for 5 percent of the variance in marital satisfaction ($n = 78$, Multiple $R = 0.0555$, $F = 4.46$, $df = 1$, $p < .05$). Physicians' work involvement had a negative coefficient of -1.3108 , indicating that the more physicians are involved in their work, the higher their marital satisfaction.

For physicians who work an average of 51 to 60 hours per week, physicians' work satisfaction ($Beta = -1.1093$) and gender ($Beta = 11.9679$) explained 14 percent of the variance in their marital satisfaction ($n = 85$, $Beta = -1.3108$, Multiple $R = 0.1428$, $F = 6.83$, $df = 2$, $p < .01$).

This finding indicates that the higher work satisfaction, is associated with higher marital satisfaction.

For physicians who work an average of 61 to 70 hours per week, the step-wise model yielded no significant predictors of marital satisfaction. The step-wise multiple regression for physicians who worked over 70 hours per week shown in Table 23 revealed that physicians' work stress explains twenty-two percent of the variance in their marital satisfaction ($n = 31$, $Beta = 5.8234$, $Multiple\ R = 0.2273$, $F = 8.53$, $df = 1$, $p < .01$). The beta indicates that as work stress decreases, marital satisfaction increases.

Table 23

Predictor Variables for Physicians' Marital Satisfaction Using Average Hours Per Week
Physicians Work

Hours	<u>n</u>	Predictor Variables	Beta Weights	Multiple R-Square	Degrees of Freedom	F Ratio	P Value
40-50	78	Work Involvement	-1.3108	.0555	1	4.46	.05
51-60	85	Work Satisfaction	-1.1093	.1428	2	6.83	.01
		Gender	11.9679				
61-70	36	None					
Above 70	31	Work Stress	5.8234	.2273	1	8.53	.01

Physicians' Spouses' Marital Satisfaction

Using the same categories of average hours per week physicians work, step-wise multiple regressions on physicians' spouses showed more variables emerged as predictors of marital satisfaction than did analyses of physicians' marital satisfaction. Table 24 shows that there were not enough physicians' spouses to run a step-wise regression in the category where physicians worked less than 40 hours per week.

Table 24 also shows that, for physicians' spouses whose partners worked an average of 40 to 50 hours per week, three predictor variables of marital satisfaction emerged. These variables were: the spouses' perception of physicians' work satisfaction, physicians' work involvement, and the number of children living in the home ($n = 70$, Multiple $R = 0.2946$, $F = 9.19$, $df = 3$, $p < .01$). Both physicians' work satisfaction and number of children had negative beta weights (-1.6237 , -3.4040 respectively) indicating that the more work satisfaction spouses perceive of physicians, the higher the spouses' marital satisfaction. The more children at home, the lower the marital satisfaction of physicians' spouses. The more involved physicians' spouses perceived physicians to be in their work, the lower the physicians' spouses marital satisfaction.

Additionally, Table 24 shows that when physicians'

spouses report that physicians work between 51 - 60 hours per week, physicians' work satisfaction explains fourteen percent of the variance in physicians' spouses' marital satisfaction ($n = 60$, Multiple R-Square = 0.1428, $F = 9.66$, $df = 1$, $p < .01$), with a negative beta weight of -1.6830. Thus, the more physicians' spouses perceived physicians to be satisfied with their work, the higher the spouses' marital satisfaction.

For the spouses of physicians who work an average of 61 - 70 hours a week, over 50 percent of the variance of physicians' spouses' marital satisfaction can be explained. These variables are shown in Table 24 to be spouses' perception of physicians' work satisfaction (beta = -2.2307), physicians' work involvement (beta = 2.3257), and the average hours per week physicians are "on-call" (beta = -0.0793), ($n = 36$, Multiple R = 0.5876, $F = 15.20$, $df = 3$, $p < .01$). The results indicated that as spouses' perception of physicians' work satisfaction increases so does the spouses' marital satisfaction, and as physicians' work stress and "on-call" hours decrease, physicians' spouses' marital satisfaction increases.

The last category of hours worked per week shown in Table 24 revealed that for spouses of physicians who work over 70 hours per week, spouses' reports of physicians' work involvement (beta = 2.2563) and the amount of physicians' "on-call" hours (beta = 0.0957) also yields a

model of physicians' spouses' marital satisfaction ($n = 35$, Multiple $R = 0.2863$, $F = 6.42$, $df = 2$, $p < .01$). The less involved and the less "on-call" hours physicians experience, the higher their spouses' marital satisfaction.

Table 24

Predictor Variables for Physicians' Spouses' Marital Satisfaction Using Average Hours Per Week Physicians Work

Hours	<u>n</u>	Predictor Variables	Beta Weights	Multiple R-Square	Degrees of Freedom	F Ratio	P Value
40-50	70	Work Involvement	1.8361	.2946	3	9.19	.01
		Work Satisfaction	-1.6237				
		# of Children	-3.4040				
51-60	60	Work Satisfaction	-1.6830	.1428	1	9.66	.01
61-70	36	Work Satisfaction	-2.2307	.5876	3	15.20	.01
		Work Stress	2.3257				
		On-Call Hours	-0.0793				
Above 70	35	Work Involvement	2.2563	.2863	2	6.42	.01
		On-Call Hours	0.0957				

Marital Satisfaction for Categories of
Physicians' Work Environments

Physicians' Marital Satisfaction

Separate step-wise multiple regressions were run on marital satisfaction for each of the five different working environments of physicians. These five categories were: hospital settings, private or solo practices, medical clinics or group practices, medical teaching facilities, and "other" category. As before, all the continuous variables of work/family overlap and demographics were included in the regression analyses.

For physicians who worked in hospital settings, none of the work/family dimensions or the demographic variables were significant predictors of physicians' marital satisfaction. Table 25 shows that, for physicians who worked in private or solo practices, the number of "on-call" hours worked was a significant predictor of marital satisfaction ($n = 78$, Multiple $R = 0.0595$, $F = 4.81$, $df = 1$, $p < .01$). This variable also had a negative beta of -0.0599 , indicating that the less "on-call" hours, the higher the marital satisfaction.

Table 25 also indicates that for physicians who worked in medical groups or clinics, two variables predict fifteen percent of the variance in marital satisfaction ($n = 75$, Multiple $R = 0.1556$, $F = 6.64$, $df = 2$, $p < .01$). These two variables were physicians' work involvement and gender,

Table 25

Predictor Variables for Physicians' Marital Satisfaction Using Physicians' Working Environment

Working Environment	<u>n</u>	Predictor Variables	Beta Weights	Multiple R-Square	Degrees of Freedom	F Ratio	P Value
Hospital	52	None					
Private Practice	78	On-Call Hours	-0.0599	.0595	1	4.81	.01
Clinics	75	Work Involvement	-2.0654	.1556	2	6.64	.01
		Gender	12.8742				
Teaching Facility	31	Age	-0.5701	.1292	1	4.30	.05
"other"	18	<u>n</u> too small					

with physicians' work involvement having a negative beta of -2.0654 and gender a positive beta of 12.8742. These beta weights indicate that physicians who were less involved and female physicians were most likely to have higher marital satisfaction.

In the category of physicians who worked in medical teaching facilities, age was the only predictor variable for marital satisfaction, ($n = 31$, Multiple $R = 0.1292$, $F = 4.30$, $df = 1$, $p < .05$), with a negative beta of -0.5701, indicating that the younger the physician the higher the marital satisfaction. Only 18 physicians worked in "other" situations, thus the n was too small to use for step-wise multiple regression analysis.

Physicians' Spouses' Marital Satisfaction

The results of physicians' spouses' marital satisfaction within the category of physicians' working environment was similar to the results found in the category physicians' spouses' marital satisfaction and work hours in that more variables reported by physicians' spouses related to marital satisfaction than did physicians' variables. Table 26 shows that in the first category, physicians who worked in hospital settings, physicians' spouses reported that physicians' work satisfaction ($\beta = -1.2029$) and physicians' work involvement ($\beta = 1.6495$) accounted for nearly one quarter of the variance in marital satisfaction ($n = 48$,

Multiple $R = 0.2342$, $F = 6.88$, $df = 2$, $p < .01$).

Marital satisfaction for spouses of physicians who worked in private or solo practice was composed of similar variables with the addition of one additional predictor variable. These three variables (listed in Table 26) were physicians' work satisfaction (beta = -2.0254), physicians' work involvement (beta = 2.9673), and the average amount of hours physicians work per week (beta = 0.3254). These findings indicated that the more physicians' spouses perceived physicians as being satisfied with their work the higher spouses' marital satisfaction. Also the less involved spouses perceived physicians to be with their work and the less number of hours per week physicians work, the higher physicians' spouses' marital satisfaction. These variables accounted for over thirty percent of the variance in marital satisfaction ($n = 60$, Multiple $R = 0.3297$, $F = 9.18$, $df = 3$, $p < .01$).

Table 26 also reveals that spouses' report of physicians' work satisfaction was the only variable to predict marital satisfaction for spouses of physicians who worked in clinic or group practices ($n = 69$, Multiple $R = 0.1312$, $F = 10.11$, $df = 1$, $p < .01$). This variable also had a negative beta of -1.4181 , indicating the higher the perceived work satisfaction, the higher the spouses' marital satisfaction.

The last two categories, physicians who worked in

Table 26

Predictor Variables for Physicians' Spouses' Marital Satisfaction Using Physicians' Working Environment

Working Environment	<u>n</u>	Predictor Variables	Beta Weights	Multiple R-Square	Degrees of Freedom	F Ratio	P Value
Hospital	48	Work Satisfaction	-1.2029	.2342	2	6.88	.01
		Work Involvement	1.6495				
Private Practice	60	Work Satisfaction	-2.0254	.3297	3	9.18	.01
		Work Involvement	2.9673				
		Hours Worked	0.3254				
Clinics	69	Work Satisfaction	-1.4181	.1312	1	10.11	.01
Teaching Facility	25	n too small					
"other"	14	n too small					

teaching facilities and "other" environments, had n's with too small a number to use step-wise multiple regressions. There were only 25 physicians' spouses who reported that their spouse worked in a teaching facility, while spouses whose physician spouses worked in the "other" environment numbered only 16.

Marital Satisfaction for Categories of
Physicians' Medical Specialties

Physicians' Marital Satisfaction

The results of the frequency distribution on medical specialties (Appendix K) showed that only three of those categories had n's with 30 or more subjects. Multiple step-wise regression needs at least 30 subjects in each category to show statistical significance. The three categories were: family/general practice, internal medicine, and surgery specialties. Step-wise multiple regression was used for each of these three categories for analysis of the impact of physicians' medical specialties on marital satisfaction for both physicians and physicians' spouses. Table 27 shows each of the separate step-wise regressions for physicians' marital satisfaction within physicians' medical specialties, while Table 28 compiles results for physicians' spouses within the same category. Referring first to Table 27, the results of marital satisfaction for physicians showed that, among physicians who were considered to be in family or general practice,

physicians' work satisfaction was the only predictor variable for physicians' marital satisfaction ($n = 47$, Multiple $R = 0.1259$, $F = 6.48$, $df = 1$, $p < .05$). This variable had a negative beta of -1.0848 , indicating that higher work satisfaction was associated with high marital satisfaction.

Analysis for physicians who reported being involved in internal medicine was able to explain eighteen percent of the variance in marital satisfaction (Table 27) with the two predictor variables of gender and physicians' time control ($n = 62$, Multiple $R = 0.1857$, $F = 6.73$, $df = 2$, $p < .01$). Beta weights of -13.0955 (gender) and -1.5998 (time control) indicated that male internists were likely to have higher marital satisfaction, and the more physicians perceive they have control of their time at work, the higher their marital satisfaction.

The last category of physicians' medical specialties was physicians who specialize in surgery. Table 27 indicates that the amount of work stress ($\beta = 2.5657$) was the only predictor variable for physicians' marital satisfaction ($n = 42$, Multiple $R = 0.1276$, $F = 5.85$, $df = 1$, $p < .05$). The positive beta with stress indicated that less stress perceived to be caused by physicians' work the higher physicians' marital satisfaction.

Table 27

Predictor Variables for Physicians' Marital Satisfaction Using Physicians' Medical Specialties

Medical Specialty	<u>n</u>	Predictor Variables	Beta Weights	Multiple R-Square	Degrees of Freedom	F Ratio	P Value
Family Practice	47	Work Satisfaction	-1.0848	.1259	1	6.48	.05
Internal Medicine	62	Gender	-13.0955	.1857	2	6.73	.01
		Time Control	-1.5998				
Surgery	42	Work Stress	2.5657	.1276	1	5.85	.05

Table 28

Predictor Variables for Physicians' Spouses' Marital Satisfaction Using Physicians'
Medical Specialties

Medical Specialty	<u>n</u>	Predictor Variables	Beta Weights	Multiple R-Square	Degrees of Freedom	F Ratio	P Value
Family Practice	39	Work Satisfaction	-1.3309	.2284	1	10.96	.01
Internal Medicine	60	Work Satisfaction	-1.2661	.1195	1	6.51	.05
Surgery	38	Work Stress	2.4798	.5474	5	7.74	.01
		Years Worked	-0.5754				
		Work Satisfaction	-3.1789				
		Time Control	3.0596				
		Number of Children	2.3279				

Physicians' Spouses' Marital Satisfaction

For spouses of physicians, in the first two categories (family or general medicine and internal medicine), only one variable predicts marital satisfaction. As shown in Table 28, that variable is spouses' report of physicians' work satisfaction (and as before, higher work satisfaction is associated with higher marital satisfaction). For spouses of family practitioners physicians' work satisfaction explains 22 percent of the variance in marital satisfaction ($n = 39$, Multiple $R = 0.2284$, $F = 10.96$, $df = 1$, $p < .01$), with a negative beta of -1.3309 . For internists' spouses, physicians' work satisfaction explains 11 percent of the variance in their marital satisfaction ($n = 50$, Multiple $R = 0.1195$, $F = 6.51$, $df = 1$, $p < .05$), with a negative beta of -1.2661 .

For spouses of physicians who specialize in surgery, a fairly strong model of marital satisfaction emerged ($n = 38$, Multiple $R = 0.5474$, $F = 7.74$, $df = 5$, $p < .01$). Five variables account for 55 percent of the variance in marital satisfaction for spouses of Surgeons. These variables were: physicians' work satisfaction (beta = -3.1789), physicians' time control (beta = 3.0596), physicians' work stress (beta = 2.4798), number of children at home (beta = 2.3279), and the number of years the physician had worked (beta = -0.5754). The results indicate that the more work satisfaction and the more children at

home the higher the marital satisfaction. Additionally, the more spouses perceive physicians to have control of their working hours, and the less work stress as well as the fewer years physicians had worked, the higher the spouses' marital satisfaction.

Marital Satisfaction By Age

Step-wise multiple regression on marital satisfaction was used for each of the four categories dealing with age of physicians and their spouses. Table 29 lists the age categories for physicians with the accompanying results of the separate step-wise regressions for each category. The regression analyses for physicians used physicians' age; that for their spouses used the spouses' age. The last category (65 and up) for both physicians and physicians' spouses did not have large enough numbers to warrant a step-wise regression analysis (physicians = 10; physicians' spouses = 6).

Physicians' Marital Satisfaction

Table 29 shows that the step-wise multiple regression revealed that, for physicians who were younger than 35 years of age, the variables of physicians' work satisfaction ($\beta = -2.1815$) and physicians' work involvement ($\beta = 1.7579$) were significant predictors of physicians' marital satisfaction ($n = 43$, Multiple $R = 0.2326$, $F = 6.06$, $df = 2$, $p < .01$). Thus higher work satisfaction and less work involvement were associated with

higher marital satisfaction.

For physicians ages 35 through 44, results in Table 29 showed that three variables account for fifteen percent of the variance in marital satisfaction ($n = 96$, Multiple $R = 0.1502$, $F = 5.42$, $df = 3$, $p < .01$). These variables were physicians' work satisfaction ($\beta = -0.7100$), the number of children ($\beta = 2.2254$), and percentage of physicians' direct care with patients ($\beta = 0.1628$). All three of these variables were associated with higher marital satisfaction.

The regression model for physicians ages 45 - 65 (Table 29) showed physicians' work satisfaction as the only predictor of marital satisfaction ($n = 104$, Multiple $R = 0.0454$, $F = 4.85$, $df = 1$, $p < .05$), with a negative beta of -0.8675 . Once again as work satisfaction increases marital satisfaction also increases.

Physicians' Spouses' Marital Satisfaction

Again, the regressions for marital satisfaction of spouses by each category had more predictor variables and explained more of the variance in their marital satisfaction than the analyses for physicians' marital satisfaction.

Table 30 indicates that for spouses who reported that they were younger than 35, fifty percent of the variance in marital satisfaction is explained by four variables ($n = 41$, Multiple $R = 0.5086$, $F = 9.32$, $df = 4$, $p < .01$):

Table 29

Predictor Variables for Physicians' Marital Satisfaction Using Physicians' Age

Physicians' Ages	<u>n</u>	Predictor Variables	Beta Weights	Multiple R-Square	Degrees of Freedom	F Ratio	P Value
Under 35	43	Work Satisfaction	-2.1815	.2326	2	6.06	.01
		Work Involvement	1.7579				
35 - 44	96	Work Satisfaction	-0.7100	.1502	3	5.42	.01
		Number of Children	2.2254				
		% Direct Care	0.1628				
45 - 64	104	Work Satisfaction	-0.8675	.0454	1	4.85	.05

spouses perceptions of physicians' work satisfaction ($\beta = -1.7871$), age (1.4342), physicians' work stress ($\beta = 1.7040$), and the percentage of physicians' direct care with their patients ($\beta = 0.2200$). Higher work satisfaction, age, and percentage of direct patient care were associated with higher marital satisfaction, and lower work stress was related to higher marital satisfaction.

The analyses on marital satisfaction for physicians' spouses whose ages were between 35 through 44 indicated that reports of physicians' work satisfaction ($\beta = -1.4145$) and physicians' work involvement ($\beta = 1.4245$) were the only predictors of marital satisfaction ($n = 108$, Multiple $R = 0.1806$, $F = 11.57$, $df = 2$, $p < .01$). Higher work satisfaction and lower work involvement were associated with higher marital satisfaction.

The last age category on Table 30 concerns marital satisfaction for physicians' spouses between 45 and 65 of age. This category's predictor variables were physicians' work satisfaction ($\beta = -2.4649$) and physicians' work involvement ($\beta = 1.6070$) ($n = 62$, Multiple $R = 0.1848$, $F = 6.69$, $df = 2$, $p < .01$). As before, these variables operated in such a way that high work satisfaction and low work involvement were associated with spouses' higher marital satisfaction.

Table 30

Predictor Variables for Spouses' Marital Satisfaction Using Spouses' Age

Spouses' Ages	<u>n</u>	Predictor Variables	Beta Weights	Multiple R-Square	Degrees of Freedom	F Ratio	P Value
Under 35	41	Work Satisfaction	-1.7871	.5086	4	9.32	.01
		Age	1.4342				
		Work Stress	1.7040				
		% Direct Care	0.2200				
35 - 44	108	Work Satisfaction	-1.4145	.1806	2	11.57	.01
		Work Involvement	1.4245				
45 - 64	62	Work Satisfaction	-2.4649	.1848	2	6.69	.01
		Work Involvement	1.6070				

V. DISCUSSION AND CONCLUSION

Review of the Purpose of Study

This study was built on the foundation of literature from two fields of research: family studies and medical marriages. The majority of the research on medical marriages had weak methodologies and questionable conclusions. Even though these studies were speculative, conclusions were drawn indicating that medical marriages can be plagued with certain social, mental, and marital problems. Given that the majority of the existing literature dealt with only the physician or the physicians' spouse, this study concentrated on analyses from both spouses. The literature suggested that certain job-related activities of physicians can contribute to lower marital satisfaction (Coombs, 1971; Elliot, 1979; Evans, 1965; Gerber, 1983; Lewis, 1965).

More broadly, the literature on how work in general may affect family life suggested five dimensions that overlap into family lives and influence family satisfaction (Kanter, 1977). These five areas were: 1) the amount of job/work absorption, 2) the time and timing of a job, 3) the rewards and resources offered by a job, 4) the occupational culture and world view of the job, and 5) the emotional climate of a job. This study took one particular occupation with a unique culture (physicians) and applied

Kanter's conceptualization of the dimensions of work/family overlap to the analysis of marital satisfaction of both physicians and their spouses. Even though rewards and resources is an important part of Kanter's work/family dimensions, it was not used in this study. The literature on medical marriages was very explicit how physicians have high levels of rewards and resources: it was shown that physicians have high incomes, and high social status. Both of these factors were the basis of Kanter's area of rewards and resources. The literature also showed that these rewards can also have a negative influence on marriages as well as a positive influence. For example; drugs and alcohol abuse are high in medical marriages, physicians have a high suicide rate, and individuals often stay in unsatisfying relationships to maintain social expectations. The literature was so clear on these issues that the decision was made to explore the other work/family dimensions that were more questionable.

Two research questions were developed to cover dimensions of work/family overlap and specific areas of physicians' job related activities. Additional demographic variables on work, individuals, and families were used as a means to comprehend more fully physicians and physicians' spouses marital satisfaction.

Work/Family Overlap

Before research question one could be addressed, a

scale was developed to analyze factors related to Kanter's dimensions of work/family overlap. Factor analysis of the measure developed for this study revealed four factors that approximate Kanter's work/family dimensions. These factors were labeled: satisfaction, time, stress, and involvement.

Research question one asked how these four factors are associated with the marital satisfaction of physicians and their spouses. The findings indicated that for physicians, the higher the work satisfaction of physicians, the higher their marital satisfaction. This was the only factor which was associated strongly with physicians' marital satisfaction. This finding is consistent with Kanter's (1977) assertion that the more satisfied a person is with his/her job, the more satisfied that person may be with his/her marriage. Yet it is important to recognize that work satisfaction was related to physicians' marital satisfaction at a fairly low level. This finding may also be due in part to difference in gender. Physicians' spouses, who are represented in this study by a vast majority of females, perceived physicians' work satisfaction to account for a larger percentage of their own marital satisfaction than did physicians. The low predictability of physicians' marital satisfaction may also be explained by Clark, Nye, and Gecas's (1978) conclusion that marital satisfaction is not affected by the husbands' job. Since the majority of physicians in this study are

husbands, they may not perceive that their work is that related to their marital satisfaction, regarding work and marriage instead as two separate activities.

For physicians' spouses, the factors of physicians' work satisfaction and physicians' work involvement were related to physicians' spouses' marital satisfaction in the regression analyses. Spouses who perceived that their marital partners were satisfied with being physicians experienced higher marital satisfaction, analogous to the influence of physicians' work satisfaction on physicians' marital satisfaction. On the other hand, the more physicians were involved in their work, the lower the physicians' spouses' marital satisfaction. This can be illustrated from the literature's suggestions that when physicians became overly involved in their work they avoid emotional closeness in their marriages, and that physicians' spouses (wives) can become "ill" as a means to get attention from their over-involved physician husbands (Coombs, 1971; Gabbard, Menniger, and Coyne, 1987; Lewis, 1965; and Miles, Krell, and Lin, 1975).

Although regression models for the four areas of work/family overlap (for physicians in particular) accounted for only small amounts of variance in marital satisfaction, it is not to say that these factors are not important areas. Perhaps they are not as important for this particular occupation as compared to other

occupations. The correlations using these work/family factors support this idea, especially with physicians, in that work satisfaction was the only factor associated with marital satisfaction. Additionally, physicians perceived that work satisfaction was associated with time control. Spouses reported more of the work/family dimensions were associated with marital satisfaction and with each other than did physicians. For spouses, their perception of physicians' work satisfaction, stress, and involvement were associated with their marital satisfaction. Spouses also perceived work satisfaction to be associated with time control and work involvement, as well as time control and stress.

The way in which physicians and their spouses are socialized may also help explain why the more specific dimensions of work/family overlap were not associated with marital satisfaction. Many of the studies indicated that part of physicians' training is being taught that being a physician is the most important area of physicians' lives and that families and personal needs come second (Coombs, 1971, Gerber, 1983; and Taubman, 1974). Due to this training physicians and their spouses may adjust to physicians' work styles in such a way as to accept physicians' role more readily than do those in other professions. If this is true, then aspects of physicians' work schedule and structure may have less impact on their

marital satisfaction than expected, particularly for physicians.

Work and Family Demographics

Research question two asked how specific demographic variables were associated with the marital satisfaction of physicians and their spouses. Specific variables were the number of hours physicians' work, physicians' medical specialties, physicians' working environment, and the ages of physicians and their spouses. ANOVAs revealed that age was the only variable found to be significant for either physicians or their spouses among the demographic variables. For physicians, the age category of 35 through 45 accounted for the lowest scores in marital satisfaction. For physicians' spouses, two categories, ages 35 - 45 and ages 45 - 65 accounted for the lowest marital satisfaction. This supports the literature on medical marriages, which indicated that at the height of physicians' careers (approximately ages 35 - 45) physicians would have lower marital satisfaction (Evans, 1965; Glick and Borus, 1984; Miles, Krell, and Lin, 1975; and Rose and Rosow, 1972). These findings suggest that the younger the physician the higher the physician's marital satisfaction; after the physician's medical practice has stabilized and his/her children begin to leave home physicians' marital satisfaction raise to a level similar to what it was at the beginning of his/her marriage. This finding also supports

life cycle literature on marital satisfaction. Cole's (1984) study concluded that marital satisfaction was highest in the earlier stages of marriage including the child bearing years, and that satisfaction decreases during the child rearing years and increases later as the children begin to leave home.

For physicians' spouses, low marital satisfaction is extended until after physicians retire. This difference is suggestive of perceived differences in marital satisfaction between spouses in occupations where the job characteristics are similar to that of physicians, that is, long hours, high stress, high job performance expectations, and high status. Since this study is cross sectional and not longitudinal these similarities among the spouses age 45 - 65 could be the result of a cohort effect rather than a life cycle stage. Another explanation of the differences in this finding between physicians and their spouses could be that the spouses who are primary caregivers to children view their marriage differently than does the spouse who is not the primary caregiver. The last reason for this difference could be due to perceived differences in marital satisfaction by gender, particularly wives. Rollins and Feldman (1970) found that wives marital satisfaction differed from husbands across the lifespan. Rollins and Feldman found that both husbands and wives experiences decreases in marital satisfaction after the birth of the

first child, leveling off until the teenage stage. At this point men continue increasing until the retirement stage; women decrease at the teenage stage through the end of the launching stage and the children have left home. Several other studies found that at different stages of the life cycle women had lower marital satisfaction scores or had more ability to predict marital satisfaction than did men (Gilford, 1984; Kotler, 1985).

Because the other variables were not associated with marital satisfaction, the findings from this study did not support the medical literature which postulated differences in marital satisfaction depending on the number of hours physicians work, physicians' working environment, and physicians' medical specialties. Many of the studies in the literature had methodological weaknesses (i.e., small sample sizes, clinical populations, affiliation with the researcher, and non-random samples) which may have resulted in conclusions which were not representative of the normal population of medical marriages. Thus, the existing literature may have overestimated the effects of work conditions on marital satisfaction of physicians. This study used random sampling, and the high response rate is indicative of high motivation to answer a survey on medical marriages. This sample may be more representative of the normal population of medical marriages. If this is the case, the absence of differences in marital satisfaction

between the work-related variables (i.e., working hours, medical specialties, and working environment) may be representative of average medical marriages. Garvey and Tuason (1979) came to the conclusion that even if physicians did overrate their marital satisfaction, at least they viewed their marriages as being no worse than the average marriage in the general population. With a larger, representative sample, this study's findings seems to conclude that "a physician is a physician is a physician"; in other words, there are indeed no differences within these categories.

The Effects of Work/Family Perceptions of Overlap
and Work Characteristics on Marital Satisfaction of
Medical Marriages: A Comprehensive Model

Regression analyses were attempted, using perceptions of work/family overlap and work/family demographics, to make a comprehensive model of marital satisfaction of physicians and physicians' spouses. First, this combined model was used with all physicians and then with all physicians' spouses. Second, categories within the demographic job-related variables were analyzed using the combined model. A discussion of the results of these steps for the physicians will be presented first, followed by those of the physicians' spouses. Last will be a section comparing the differences between physicians and their spouses within the work-related demographic categories.

For physicians only, physicians' work satisfaction was the only variable which entered in the prediction equation of physicians' marital satisfaction. Neither the age variable, which had entered into the work characteristics analyses, nor any other work characteristic's entered into the combined model as it had in research question 2. When allowed to enter the prediction equation together, objective characteristics of physicians' work and work/family overlap were no different from those viewed separately. Since there were no differences in marital satisfaction, or any predictor variables among physicians as a group, the assumption was made that even though marital satisfaction was similar for each category, perhaps marital satisfaction was influenced differently by the work/family overlap variables and work-related variables within each of the categories.

There seemed to be a pattern that involved the amount of hours physicians worked as an influence on their marital satisfaction. Physicians who were in the lower work hours (40 - 50 hours) seemed to want to work more hours or be more involved in their work more than they currently were, because as work hours increased so did marital satisfaction. This could be due to physicians who work 40 - 50 hours per week trying to build a medical practice or having a difficult time enjoying working less hours as they approach retirement. Physicians in the next category (51

- 60 work hours per week) liked what they were doing so much that work satisfaction increased their marital satisfaction, and female physicians felt this increase even more so. When physicians worked over 60 hours a week, no work variables accounted for their marital satisfaction. Work may have become so intense when working over 70 hours per week that work decreased their marital satisfaction.

The literature suggested four different working environments (hospitals, clinics, private practice, and medical teaching facilities) would be associated with differences in marital satisfaction among physicians (Gerber, 1983; and Mawardi, 1979). The use of the combined model found different predictor variables influencing physicians' marital satisfaction in all four areas. It is interesting that for physicians who worked in hospital settings, none of the variables predicted marital satisfaction, while physicians in private practices indicated that the more "on-call" hours they experienced, the lower their marital satisfaction. Physicians who practiced in groups or clinics reported that the more they were involved in their work, the lower their marital satisfaction. Marital satisfaction in this group was also higher if the physician was female. Age was the only predictor variable for physicians in medical teaching facilities, denoting that the younger the physician, the higher the marital satisfaction.

Perhaps the support and resources of physicians who work in hospitals explains why none of the work/family overlap and work/family demographics accounted for any variance in marital satisfaction. These resources could be due to a more regimented schedule or little variation in their schedules compared to physicians in other working environments (i.e., clinics or private practice). Physicians who work in less supportive environments may experience more disruptions from "on-hours", or become overinvolved trying to maintain a competitive practice. For example, physicians who work by themselves felt that their on-call hours decrease their marital satisfaction. Similarly, physicians who work in clinics felt that being too involved in work decreases their marital satisfaction.

With physicians who teach medicine it is the younger physicians, most likely those who are not burned out with the routine of teaching or the pressures of researching, who experience higher marital satisfaction. These differences are supported by the literature indicating that differences in work satisfaction between private practitioners and "non-office-based" practitioners (hospitals and teaching facilities) are due to time pressures, treatment failures, administrative activities, and paperwork (Mawardi, 1979).

The literature referring to physicians' medical specialties suggested that there would be differences in

marital satisfaction due to medical specialties (Coombs, 1971; Gabbard et al., 1987; Garvey and Tuason, 1979; Gerber, 1983; Krakowski, 1982; Rose and Rosow, 1972 and Vaillant et al., 1972). To the contrary, this study found no differences. What was discovered is that different variables are associated with marital satisfaction due to the medical specialties. Frequencies among the medical specialties showed that the majority of specialties represented in the study had too small an n for analysis. But the findings presented suggestive evidence of different variables that were able to predict marital satisfaction within three different specialties. For the specialty of family practitioners, higher work satisfaction was associated with higher marital satisfaction. For those physicians practicing internal medicine, gender (with males having higher marital satisfaction) and greater perception of time control over work hours led to higher marital satisfaction. For surgeons, lower stress from work was the biggest predictor of higher marital satisfaction. These differences could be explained by Taylor's (1986) exploration into characteristics of the different medical specialties. Taylor indicated that family and general practitioners tend to be more "people oriented" and like to be on the "front line" of medicine. Taylor also indicated that one of internists' major complaints was the long hours and the "on-call" schedules. This could account for the

"time control" factor influencing marital satisfaction. As for surgeons, personality types were described as compulsive, perfectionistic, and hard working (Taylor, 1986). These types of individuals would most likely be on the edge of stress most of the time as they attempted to perfect work and work harder while balancing their work and family.

Analyses were not conducted on the other specialties. Because different variables were found to affect marital satisfaction among these three reported specialties, it may be assumed that different predictor variables of marital satisfaction may also emerge among other medical specialties. This is an area where further research is needed if an attempt in describing the dynamic of the particular specialty and marital life is desired.

The literature strongly suggested that the lowest level of marital satisfaction for physicians and their spouses was during the ages of 35 - 45 at the height of physicians' medical careers (Evans, 1965; Glick and Borus, 1984; Miles, Krell, and Lin, 1975; and Rose and Rosow, 1972). Findings in this study supported the literature. Physicians under the age of 35 reported that the higher the work satisfaction, and the lower their work involvement, the higher their marital satisfaction. For the critical age (35 - 45 years old) which experienced the lowest overall levels of marital satisfaction, three variables

predicted physicians' marital satisfaction. First, the more work satisfaction, the higher the marital satisfaction. Second, the more children physicians had, the higher their marital satisfaction. And lastly, the more direct care physicians had with their patients, the higher the marital satisfaction. This finding is in direct opposition to suggestions made in the literature that the higher the percentage of direct patient care physicians experience, the lower their marital satisfaction (Elliot, 1979; Gerber, 1983; Vaillant et al., 1972). Gerber's study is highly impressionistic, with no statistical data. Both Elliot's and Vaillant et al.'s research was based on small sample sizes ($n = 34$ and $n = 16$, respectively). In the present study, the n for this age category (35 - 44) was 96, giving more power to the analyses. Differences between the methodology and sample size of this study and the studies cited above may illuminate the differences in findings.

Work satisfaction is the one work/family variable that seems to be constant throughout all the work characteristic categories. An explanation for this age category's marital satisfaction being enhanced by physicians' direct care of patients may be that this variable is also a large part of physicians' perception of work satisfaction. This controversy would suggest that further investigation is needed of the variable direct patient care. For the

oldest age group (45 - 65), work satisfaction was the only predictor variable of physicians' marital satisfaction, verifying what was found in the other categories.

Physicians' Spouses' Marital Satisfaction

Analyses of physicians' spouses were performed in the identical manner as was physicians, in that regressions for the marital satisfaction of all spouses were analyzed before separating them into the four work-related categories. From the spouses' perception, three variables were able to account for their marital satisfaction. Spouses indicated the more they perceived physicians to be satisfied with work, the higher their own marital satisfaction, and the more involved they perceived physicians to be with work, the lower their own marital satisfaction. The last variable associated with physicians' spouses' marital satisfaction, and the only objective work characteristic in the model, was how many hours per week physicians worked. The more hours physicians worked, the lower the marital satisfaction of physicians' spouses. When research questions one and two were analyzed separately, question one reported the same work/family overlap variables to be associated with physicians' spouses' marital satisfaction as reported here, whereas question two showed no work variables to be associated with spouses' marital satisfaction. The difference using the combined model is that the amount of

hours physicians' worked were associated with the spouses' perception of physicians' work satisfaction, perceived work involvement, and spouses' marital satisfaction. This finding can be explained by the possibility that when physicians work more hours they do so because they are more involved with their work, or vice versa. Correlations showed a significant relationship between work hours and work involvement. Thus, an increase in either variable would result in an increase in the other, which would lower physicians' spouses' marital satisfaction.

Physician's work satisfaction was a predictor variable for physicians' spouses marital satisfaction in all the categories of hours per week physicians work except above 70 hours/week. In this category physicians' work stress and and physicians' "on-call" hours account for nearly one third of physicians' spouses marital satisfaction. These spouses proclaimed that the lower the work stress of physicians, the higher their own marital satisfaction. It is also interesting to note that these spouses also indicate that the more "on-call" hours physicians have, the higher the marital satisfaction. In the preceding category for physicians' spouses (61 - 70 hours per week) the same predictor variables were reported for spouses where physicians worked more hours (over 70 hours per week), except that "on-call" hours had the opposite impact on marital satisfaction, so that fewer "on-call" hours

contributed to an increase in their marital satisfaction. Using this combined model with spouses of physicians who worked 51 - 60 hours per week, only physicians' work satisfaction contributed to physicians' spouses' marital satisfaction. For spouses of physicians who worked between 40 - 50 hours per week, two additional variables, in addition to physicians' work satisfaction, were associated with marital satisfaction. The less physicians were involved in their work and the less number of children in the marriage, the higher physicians' spouses marital satisfaction.

As in preceding sections, the more physicians are satisfied with their work in all the categories for physicians' working environment, the higher their spouses' marital satisfaction. In addition to work satisfaction, physicians who worked in hospitals had spouses who indicated that the less involved physicians were at work, the higher the spouses' marital satisfaction. The same model was true for physicians' spouses where physicians worked in private practices, only with the additional variable that the less hours physicians worked, the higher marital satisfaction for their spouses. Physicians' work satisfaction was the only predictor of marital satisfaction for spouses of physicians who work in clinics. Spouses of physicians who worked in medical teaching facilities were not analyzed due to the smallness of the sample size.

The same three medical specialties that were used for physicians (internal medicine, family and general practice, and surgery), were analyzed using the combined model for physicians' spouses marital satisfaction. Work satisfaction was found to be the only significant variable predicting marital satisfaction of spouses married to physicians who are internists and family practitioners. Physicians' spouses in both categories indicated that the more satisfied spouses perceived physicians to be with work, the higher physicians' spouses' marital satisfaction. The category of physicians' spouses who were married to surgeons revealed 5 variables that accounted for over half of their marital satisfaction. These spouses felt that the less stress surgeons experienced due to work, the higher surgeons' spouses' marital satisfaction, and the fewer years surgeons had worked, the higher marital satisfaction. Work satisfaction was another predictor variable as was the number of children, so that the more work satisfaction the more children, the greater the marital satisfaction. The last variable that was associated to surgeons' spouses' marital satisfaction was the perceived time control of the surgeon. The more surgeons' spouses perceived surgeons had control of their time, the higher the marital satisfaction.

The last category analyzed for physicians' spouses' marital satisfaction was age. The last two categories, 35 - 44, and 45 - 64, had the same predictor variables for

physicians' spouses marital satisfaction, work satisfaction, and work involvement. Both categories revealed that the more spouses perceive physicians as being satisfied with work, the higher the marital satisfaction. Likewise, both categories showed that as physicians' spouses' perceived physicians to become more involved in their work, the lower the spouses' marital satisfaction. For physicians' spouses who were under the age of 35, four variables were able to account for half of their marital satisfaction. Work satisfaction was the same in this category as in all other categories. Physicians' spouses who were younger than 35 also indicated that the older they were the higher their marital satisfaction. Additionally, in this category, the less physicians felt stress from work the higher spouses' marital satisfaction, and as the percentage of direct patient care for physicians increased so did spouses' marital satisfaction.

Comparisons Between Work-Related Categories

In order to better understand the differences between spouses and physicians in the various work-related categories, Tables 31 - 35 were developed as a visual comparison between the groups. These tables should be integrated in order to produce the best interpretation. Specific application of these tables will be discussed in the section outlining the implications for physicians' education and clinical intervention.

Table 31

Predictor Variables on the Marital Satisfaction of
Physicians and Their Spouses

Physicians' Predictor Variables	Physicians' Spouses' Predictor Variables
↑ Work Satisfaction	Work Satisfaction ↑
	Work Involvement ↓
	Hours Worked ↑

Note: ↑ Indicates higher marital satisfaction.

↓ Indicates lower marital satisfaction.

Table 32

Summary of Hours Worked and Other Variables Predicting Marital Satisfaction

Physicians' Predictor Variables	Physicians' Spouses' Predictor Variables
Hours Worked:	
40 - 50 ↑ Work Involvement	Work Involvement ↓ Work Satisfaction ↑ # of Children ↓
51 - 60 ↑ Work Satisfaction ↑ Gender (Female)	Work Satisfaction ↑
61 - 70 None	Work Satisfaction ↑ Work Stress ↓ "On Call" ↓
Above 70 ↓ Work Stress	Work Involvement ↓ "On Call" ↑

Note: ↑ Indicates higher marital satisfaction.

 ↓ Indicates lower marital satisfaction.

Table 33

Summary of Working Environment and Other Variables
Predicting Marital Satisfaction

Physicians' Predictor Variables	Physicians' Spouses' Predictor Variables
Working Environment:	
Hospital None	Work Satisfaction ↑ Work Involvement ↓
Private Practice ↓ "On Call"	Work Satisfaction ↑ Work Involvement ↓ Hours Worked ↑
Clinics ↑ Work Involvement	Work Satisfaction ↑

Note: ↑ Indicates higher marital satisfaction.

 ↓ Indicates lower marital satisfaction.

Table 34

Summary of Medical Specialty and Other Variables Predicting Marital Satisfaction

Physicians' Predictor Variables	Physicians' Spouses' Predictor Variables
Medical Specialty:	
Family Practice ↑ Work Satisfaction	Work Satisfaction ↑
Internal Medicine ↑ Gender (Male) ↓ Time Control	Work Satisfaction ↑
Surgery ↓ Work Stress	Work Stress ↓ Years Worked ↓ Work Satisfaction ↑ Time Control ↓ # Of Children ↑

Note: ↑ Indicates higher marital satisfaction.

↓ Indicates lower marital satisfaction.

Table 35

Summary of Age and Other Variables Predicting Marital Satisfaction

Physicians' Predictor Variables	Physicians' Spouses' Predictor Variables
Physicians' Age:	Physicians' Spouses' Age
Under 35 ↑ Work Satisfaction	Work Satisfaction ↑
↓ Work Involvement	Age (Older) ↑
	Work Stress ↓
	% of Direct Care ↑
35 - 44 ↑ Work Satisfaction	Work Satisfaction ↑
↑ # of Children	Work Involvement ↓
↑ % of Direct Care	
45 - 64 ↑ Work Satisfaction	Work Satisfaction ↑
	Work Involvement ↓

Note: ↑ Indicates higher marital satisfaction.

↓ Indicates lower marital satisfaction.

Table 31 shows a difference in the reports of the overall models between physicians and their spouses, with spouses reporting two additional variables (work involvement and hours worked) influencing their marital satisfaction. Thus, as a overall group, spouses perceive physicians' work as having more impact on marital satisfaction than did physicians.

Table 32 shows two important differences between physicians and their spouses and the hours per week physicians work. First, as mentioned earlier, for physicians who work 61 - 70 hours per week there were no variables predicting marital satisfaction. Their spouses are very much aware of physicians' work hours, indicating that these hours cause stress in both physicians and spouses and that these long hours are impacted by the disruptiveness of the "on-call" hours, which decreased their marital satisfaction. These variables account for 60 percent of spouses' marital satisfaction while physicians could account for no predictors of marital satisfaction. It seems that the more physicians become involved in their work, the more aware their spouses became of that involvement and the greater its influence in their own marital satisfaction. The second difference between spouses and physicians is in the last two categories (61 - 70 and over 70). There seems to be a developmental phase that spouses experience when they want physicians home more.

When physicians work 61 - 70 hours per week, spouses felt that physicians' marital satisfaction was important but that the stress caused by the job and the disruption of the "on-call" decreased spouses' marital satisfaction. But when physicians began to work over 70 hours per week spouses seemed to have accepted the physicians' work role, are frustrated by the work involvement but find it easy for physicians to be away or "on-call" than to deal with trying to battle the disruptions that the other spouses (61 - 70 hours) struggled with.

In comparing both physicians and their spouses in the category of physicians' working environment (Table 33), it was found that spouses, as before, reported more work/family overlap variables and work/family variables influencing their marital satisfaction than did physicians. Private practitioners reported that more "on-call" hours decreased their marital satisfaction. Their spouses reported physicians' work satisfaction increased marital satisfaction while work involvement and hours worked decreased marital satisfaction. An explanation of the difference between physicians and their spouses in this category may be that this variable is one and the same, only perceived differently. For example, when physicians have more "on-call" hours, spouses may perceive this simply to be more hours worked, and not differentiate between the two. In other words, to the spouse, "on-call" hours may be

interpreted as the normal expected work, whereas, physicians may interpret "on-call" hours to be MORE work than normal. With the differences that exist between physicians' and their spouses' marital satisfaction among the different work environments, there is a possibility that differences would exist between physicians and their spouses in the category of teaching facilities. Further investigation is warranted in this area.

When comparing the differences between spouses within the categories of medical specialties (Table 34), the category of "Surgeon" must be noted. For surgeons, only one variable (work stress) was associated with their marital satisfaction, whereas surgeons' spouses indicated that five variables impacted their marital satisfaction. Three of these variables decreased spouses' marital satisfaction and were directly related to the surgeons' work. These differences can be attributed to the long hours and work stress experienced by these physicians, such that they are more aware of their work than their marriages; however, their spouses are may be just the opposite.

Due to the small number of physicians and physicians' spouses in each of the categories of medical specialties and in conjunction with the findings reported here, the assumption can be made that there are many more differences in marital satisfaction among the medical specialties, but more research is needed.

As with the previous work-related categories, Table 34 shows that work satisfaction influenced marital satisfaction for both physicians and their spouses in all of the categories pertaining to age. Influence on marital satisfaction for physicians under the age of 35 included work involvement whereas, influence on spouses' marital satisfaction included age, work stress, and percentage of direct care. In addition to work satisfaction, physicians whose age was in the category the literature suggested as the critical category, viewed the number of children they had, and their percentage of direct patient care as increasing marital satisfaction. Spouses who were the same age reported two additional variables work satisfaction and work involvement, to impact marital satisfaction. Work involvement had a negative association with marital satisfaction.

It is interesting to note that in almost all analyses of marital satisfaction for physicians and physicians' spouses, especially in the combined model, physicians' spouses accounted not only for more variables influencing their marital satisfaction than physicians, but also that physicians' spouses variables were able to account for larger percentages of the variance in marital satisfaction than did physicians' variables. Using this combined model for physicians' spouses, some of the explanation of the variables that accounted for their marital satisfaction can

be that the more involved physicians are with work, the more hours they are inclined to work. Theoretically, this phenomenon might be explained by the "principle of least interest" (Waller, 1951). When physicians are more involved in their work they may be less involved in their marriages, whereas their spouses, due to the physicians' lack of marital involvement may be more aware of the "missing physician" and can more accurately state what type of activities or attitudes makes marriage more or less satisfying. If this is true, then this could possibly be explained in the following manner: If a physician is happy being a physician, then both the physician and the physician's spouse are happy, but if a physician becomes overinvolved and works too many hours to maintain that perceived happiness, then the physician stays happy with work. As a result of this involvement the physician can possibly be unaware that his/her spouse is becoming less happy. And as a result of the physician's involvement with work, it is the spouse who can see what is causing the decrease in happiness. Marks (1986) indicated that this dynamic is a cultural gender difference, that men are taught to seek happiness outside the family and women are taught to seek happiness within the family. When marriages are "stuck" and unhappy (neither spouse is experiencing growth) each spouse seeks their own comfortableness, men outside the family, women inside the family.

Future Research

The findings reported in this study, along with the study's methodology and survey construction, raise many additional questions for further research. First, considering methodology, the issue of response bias must be addressed. Respondents who return surveys may have different motivations or even different levels of marital satisfaction than those persons who did not return the surveys. A study on medical marriages may help the understanding of these complex marriages if random phones surveys were done with physicians and their spouses. Yet this methodology may not yield candid responses either. Furthermore, obtaining telephone listings could prove difficult. It would be extremely difficult contacting physicians at their work, and equally difficult obtaining a home phone number. A personal interview with them may provide the literature with different findings than those reported by mail surveys. Though personal interviews would be more time consuming, such variables as "on-call" or percentage of direct care could be clarified and give additional information to the literature. The limitation of these variables will be discussed in more detail later in this section.

A second suggestion would be to do a study using the scale developed in this study addressing Kanter's work/family dimensions along with additional questions

designed to assess the work/family dimension of rewards and resources in order to establish a total scale assessing Kanter's work/family dimensions. Labeling these work/family dimensions the same as Kanter's original labels would enable the assessment to be utilized throughout work and family research. For example, research with different occupations could be addressed to see if marital and family satisfaction is associated in the same way with work/family dimensions from one occupation to another. This type of study would also establish a possible priority of the Kanter's work/family dimensions. Even though Kanter proposed these differing work/family dimension, it was never mentioned if any of the factors impacted families more than the others. For example, in this study, the results indicated that work satisfaction was the most important variable to be reported as influencing marital satisfaction. Further investigation is needed to ascertain if any of the dimensions are more powerful influences of marital satisfaction than other the factors, or whether the impact of these factors varies between occupations.

An additional suggestion for future research deals with the findings concerning the variables of "on-call" hours and percentages of direct patient care. One of the limitations of this study was that these variables are much more complex than the questionnaire indicated. Many physicians reported that at least 99 to 100 percent of

their time is spent in direct patient care. Their evaluation of direct patient care apparently did not account for time spent in the paperwork generated by patient care, time spent in dictation of patient records, time spent studying for specific patient problems, etc. This type of question needs to be addressed in such a way as to account for more clear cut categories of direct patient care. The category of "on-call" hours is another very complex variable. This study used the average hours per week physicians reported being on-call, and difference between on-call hours became apparent. For example, some physicians were on-call 100 percent of their time, others experienced on-call hours for one month, but only once in three months. Still others had every other weekend and one week night on call. Because of the different patterns of on-call hours, there is a need to recognize these patterns and design measures that allow for a more accurate reflection of these work patterns. In this way, possible connections between these variables and marital satisfaction could be examined again.

The last area for future research deals with the socialization process of physicians and their spouses. The findings reported here professed many different variables impacting physicians and physicians' spouses marital satisfaction. These differences suggest that physicians are socialized or taught to view themselves and their marriages

in specific ways depending on different categories such as medical specialty, working environment, and age. A study could be done on how physicians are socialized in these categories. For example, do those who teach medicine differ in their expectations or role modeling? Does working in a hospital involve a different type of background than private practice? Do those who teach surgeons have different views of the physician's role in marriage versus their role as physicians compared to other specialties? And if this is the case, how does this process occur among the other medical specialties?

Additional studies on medical marriages in which both spouses are physicians would assist the literature to help analyze any differences that may exist between these dual-career marriages and marriages of one physician and a non-physician. Similarly, a study on medical marriages where physicians and nurses are married to each other would give additional insight to the complexities of medical marriages. This study did include a number of physicians and spouses where the spouse was affiliated with the medical field either as a nurse or mental health practitioner. A study on these couples could yield information as to the socialization process of spouses as well as physicians. Perhaps these spouses accept the physician role differently than physicians married to physicians or than physicians married to spouses not

affiliated with the field of medicine. Similarly, spouses who work in physicians' offices may view their marital satisfaction differently than spouses in the previously mentioned situations. In other words, there could be differences in marital satisfaction among spouses according to their own working environment, be it in the home, in a field related to medicine, or in a non-medical field. These spouses could also be socialized differently in accepting both their role as a spouse as well as physicians' roles. This socialization could either increase or decrease marital satisfaction or conflict.

Implications for Physicians' Education and Clinical Interventions

Coombs (1971) and Gerber (1983) strongly suggested that part of physicians' medical training should include courses on the dynamics of medical marriages. Information from this study would fulfill specific information taught in such a course for both physicians and their spouses. Specifically, information on the differences between physicians and their spouses could help the socializing of both physicians and their spouses, assuming that being aware of how they influence each other could enhance marital functioning and satisfaction. Using the information on age would help physicians deal with the different cyclic aspects of their jobs. Using the information on the hours physicians work could help in the

decision of how much time physicians should work in order to balance work and family roles. And lastly, using the information on medical specialties could assist physicians in choosing a medical specialty, by knowing that it is not necessarily the specialty that makes the difference on marital satisfaction, but the variables within the specialty. Using this information would help them choose by analyzing which of these variables they feel they can personally deal with. The problem with implementing this information in medical school course work is that only one partner (the future physician) would be receiving the information. Although teaching courses to physicians about how their profession affects their marriages is recommended, workshops, lectures series, or other courses also should be offered where both spouses in the medical marriage are present. This would provide spouses the opportunity to respond to and integrate the information together, rather than these issues being the responsibility of one partner. The findings of the present study would be used in such settings to enable future physicians and their spouses to be aware of the stresses and dynamics of physicians' work on their marriages before these stresses and dynamics take place. This would give them the opportunity to make their marriage more of what they want it to be rather than having the marriage be the result of physicians' work. Additionally, if future physicians and

potential spouses were aware of these dynamics, they may either choose not to marry, or choose a different occupation.

Two different conclusions can be utilized in clinical practices as a result of the findings of this study. First, it is very apparent from these findings that physicians' spouses are more involved in the dynamics of their marriages than are physicians. Using this information, clinicians could help increase marital satisfaction in the medical marriages by providing a forum in which the marital partners can share their perspectives on the physician's job and their marriage. In particular, showing them the specific areas in which the perceptions of physicians' spouses are different from physicians' perceptions concerning the impact of work on the marriage would be helpful. Using this information would help physicians be more sensitive to the work/family overlap in a way in which neither spouse is right or wrong, but in which there is opportunity to improve the marriage as a whole.

The second area in which mental health practitioners would be able to utilize findings of the present study is using the information with clients who fit the specific categories. For example, if a clinician is treating partners in a medical marriage, and knows how many hours a week the physician works, the working environment, the physician's

specialty, and the age of both spouses, the clinician can examine the tables provided within this study (Tables 32 - 35) and recognize specific arenas wherein the couple's marital satisfaction can be changed or focused on through the process of therapy. Helping the couple see that other medical couples experience similar situations and feelings could help the couple be more accepting of change or accepting of their different roles within the marriage. Additionally, if a clinician is aware of the general dynamics of medical marriages presented by this study, the clinician will not only be more able to deal with these dynamics, but also be able to offer the medical couple an atmosphere of expertise facilitating their comfort and trust.

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Appendices

APPENDIX A

Physician's Cover Letter

August, 1989

PHYSICIAN'S NAME
OFFICE ADDRESS
CITY, STATE, ZIP

Dear Dr. NAME,

The stresses associated with being a physician are of increasing concern to the medical profession. The demanding nature of your occupation, the work hours, and the pressures due to intricate patient issues create a combination of stressors that are difficult to deal with. The roles you hold in your own family may add additional responsibilities and stresses.

Your name was drawn from a random sample of physicians throughout Oregon. If you are married, you and your spouse are being asked to give your opinions on issues involving medical marriages. If you are not presently married, please fill out the index card so that your address can be removed from future mailings intended for married couples.

We have enclosed a separate questionnaire packet for you and your spouse. Each packet contains a questionnaire and a pre-paid return envelope. In order that the results will truly represent the thinking of physicians' families in Oregon, it is important that each questionnaire be completed and returned separately.

You may be assured of strict confidentiality. The questionnaire has an identification number for mailing purposes only, so that we may check your name off the mailing list when the questionnaire is returned. Your name will never be placed on the questionnaire. We encourage your participation in this effort to better understand the interaction of physicians' work and their family lives. We are willing to come to a meeting of your local medical organization to discuss the findings once the study is complete. Please do not hesitate to call if you have any questions.

Sincerely,

David N. Bird, M.S.
Marriage and Family Therapist
Principal Investigator
(503) 757-7660

Anisa Zvonkovic, Ph.D.
Assistant Professor
Human Development
and Family Sciences
(503) 737-4765

We support this project and encourage you and your spouse to participate. After medical couples participate in this project, communication about these issues between them could enrich their relationship and reduce stress.

Mark Rampton, M.D.
Former Secretary Treasurer,
Benton County Medical Association

Alice Rampton,
Former President,
Benton County Medical Association Auxiliary

APPENDIX B

Spouse's Cover Letter

August, 1989

TO THE SPOUSE OF:
PHYSICIAN'S NAME
OFFICE ADDRESS
CITY, STATE, ZIP

Dear Physicians' Spouse,

The stresses associated with combining the role of physician and family member are of increasing concern to the medical profession. The demanding nature of your spouses' occupation, the work hours, and the pressures due to intricate patient issues, create a combination of stressors that are difficult to deal with. The roles physicians and their spouses hold in their families and independent lives may also result in additional responsibilities and stress.

Your spouse's name was drawn from a random sample of physicians throughout Oregon. You and your spouse are being asked to give your opinions on issues involving medical marriages. Because the sample was drawn from physicians' office addresses, we were not able to use your name and address in our mailing. Please accept our apology for not addressing you in a more personal manner. Because our mailing list did not include your name, your responses to our questions are totally anonymous. The questionnaire has an identification number for mailing purposes only, to keep track of returned questionnaires.

We have enclosed a separate questionnaire packet for you and your spouse. Each packet contains a questionnaire and a pre-paid return envelope. In order that the results will truly represent the thinking of physicians' families in Oregon, it is important that each questionnaire be completed and returned separately.

We encourage your participation in this effort to better understand the interaction of physicians' work and their family lives. We are willing to come to a meeting of your local medical organization to discuss the findings once the study is complete. Please do not hesitate to call if you have any questions.

Sincerely,

David N. Bird, M.S.
Marriage and Family Therapist
Principal Investigator
(503) 757-7660

Anisa Zvonkovic, Ph.D.
Assistant Professor
Human Development
and Family Sciences
(503) 737-4765

We support this project and encourage you and your spouse to participate. After medical couples participate in this project, communication about these issues between them could enrich their relationship and reduce stress.

Mark Rampton, M.D.
Former Secretary Treasurer,
Benton County Medical Association

Alice Rampton,
Former President,
Benton County Medical Association Auxiliary

APPENDIX C

Reply Post Card

This study has been designed to deal with relevant issues surrounding physicians and their spouses. Because your name was randomly selected, there was no method to identify those who are not married. Please indicate which of the following describes your present status so that we will be able to check your name and avoid further mailings that deal with medical marriages.

_____ Never Married

_____ Divorced

_____ Widowed

_____ Other (please Specify) _____

Thank you again for your willingness to participate in this project.

APPENDIX D

Follow-up Post Card

September, 1990

Last week a questionnaire seeking you and your spouse's insight about medical marriages was mailed to you. Your name was drawn from a random sample of physicians in Oregon.

If you have already completed and returned it to us please accept our sincere thanks. If not, please do so today. Because it has been sent to only a small but representative sample of Oregon physicians it is extremely important that you and your spouse be included in the study if the results are to represent accurately the opinions of Oregon physicians and their spouses.

If by some chance you did not receive the questionnaire, or it was misplaced, please contact me, and I will get another one in the mail to you.

Sincerely,

David N. Bird, Project Director,
Department of Human Development & Family Sciences
Oregon State University
Corvallis, Oregon
(503) 737-4765

APPENDIX E

Follow-up Cover Letter

September, 1990

PHYSICIAN'S NAME
OFFICE ADDRESS
CITY, STATE, ZIP

Dear Dr. NAME,

I am writing to you about our study of medical marriages. We have not yet received your and your spouse's completed questionnaires. If you have already completed and mailed in your questionnaires it is very much appreciated.

The large number of questionnaires returned is very encouraging. But whether we will be able to describe accurately how physicians and their spouses feel about the physician's occupation and their marriage depends upon you, your spouse, and the others who have not yet responded. Our past experience suggests that those of you who have not yet sent in their questionnaires may hold quite different perspectives on medical marriages than those who have responded.

This is the largest study of this type ever done. Therefore, the results are of particular importance to the medical community as well as to those who have already responded. The usefulness of our study depends on how accurately we are able to describe the characteristics and dynamics of physicians and their spouses.

It is for these reasons that I am sending this questionnaire to you once again. In case our other correspondence did not reach you or if it has been misplaced, a replacement questionnaire is enclosed for both you and your spouse. May I urge you to complete and return it as quickly as possible?

I will be happy to report the results of the findings to your local medical organizations once the study is complete. We expect to have them ready early next Spring.

Most sincerely,

David N. Bird, M.S.
Principal Investigator
Oregon State University
Department of Human Development
and Family Sciences

APPENDIX F

Dyadic Adjustment Scale

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list. Circle the appropriate number for each question below.

- | | |
|---|--------------------------|
| 1. Handling family finances | |
| 2. Matters of recreation | |
| 3. Religious matters | |
| 4. Demonstrations of affection | |
| 5. Friends | |
| 6. Sex relations | 5=ALWAYS AGREE |
| 7. Conventionality (correct or proper behavior) | 4=ALMOST ALWAYS AGREE |
| 8. Philosophy of life | 3=OCCASIONALLY DISAGREE |
| 9. Ways of dealing with parents or in-laws | 2=ALMOST ALWAYS DISAGREE |
| 10. Aims, goals or things believed important | 1=ALWAYS DISAGREE |
| 11. Amount of time spent together | |
| 12. Making major decisions | |
| 13. Household tasks | |
| 14. Leisure time interests and activities | |
| 15. Career decisions | |
-
16. How often do you discuss or have you considered divorce, separation, or terminating your relationship?
17. How often do you or your mate leave the house after a fight?
18. In general, how often do you think that things between you and your partner are going well?
19. Do you confide in your mate?
20. Do you ever regret that you got married? (or lived together)
- | |
|-----------------------|
| 0=ALL OF THE TIME |
| 1=MOST OF THE TIME |
| 2=MORE OFTEN THAN NOT |
| 3=OCCASIONALLY |
| 4=RARELY |
| 5=NEVER |

21. How often do you and your partner quarrel? 0=ALL OF THE TIME
1=MOST OF THE TIME
2=MORE OFTEN THAN NOT
3=OCCASIONALLY
4=RARELY
5=NEVER
22. How often do you and your mate "get on each other's nerves?" 3=OCCASIONALLY
4=RARELY
5=NEVER

23. Do you kiss often?

4=EVERYDAY 3=ALMOST EVERYDAY 2=OCCASIONALLY
1=RARELY 0=NEVER

24. Do you and your mate engage in outside interests together?

4=ALL OF THEM 3=MOST OF THEM 2=SOME OF THEM
1=VERY FEW OF THEM 0=NONE OF THEM

HOW OFTEN WOULD YOU SAY THE FOLLOWING EVENTS OCCUR BETWEEN YOU AND YOUR SPOUSE?

25. Having a stimulating exchange of ideas. 0=NEVER
1=LESS THAN ONCE A MONTH
26. Laughing together. 2=ONCE OR TWICE A MONTH
27. Calmly discuss something. 3=ONCE OR TWICE A WEEK
28. Work together on a project. 4=ONCE A DAY
5=MORE OFTEN

There are some things about which couples sometimes agree and sometimes disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks. (Circle your answer)

29. Being too tired for sex. Yes = 0 No = 1
30. Not showing love. Yes = 0 No = 1

31. The dots on the following line represent different degrees of happiness in your relationship. The middle point "happy" represents the degree of happiness of most relationships. Please circle the dot which best describes the degree of happiness, all things considered of your relationship.

0.....1.....2.....3.....4.....5.....6

0=EXTREMELY UNHAPPY

1=FAIRLY UNHAPPY

2=A LITTLE UNHAPPY

3=HAPPY

4=VERY HAPPY

5=EXTREMELY HAPPY

6=PERFECT

32. Which of the following statements best describes how you feel about the future of your relationship? (Circle the appropriate number).

- 5 I want desperately for my relationship to succeed, and would go to almost any length to see that it does.
- 4 I want very much for my relationship to succeed, and will do all I can to see that it does.
- 3 I want very much for my relationship to succeed, and will do my fair share to see that it does.
- 2 It would be nice if my relationship succeeded, but I can't do much more than I am doing now to help it succeed.
- 1 It would be nice if it succeeded, but I refuse to do any more than I am doing now to keep the relationship going.
- 0 My relationship can never succeed, and there is no more that I can do to keep the relationship going.

APPENDIX G

Physicians' 14 Questions Assessing Work/Family Overlap

Please indicate your level of agreement or disagreement with the following items.

- | Strongly
Agree | Mildly
Agree | Neither Agree
nor Disagree | Mildly
Disagree | Strongly
Disagree |
|-------------------|--|-------------------------------|--------------------|----------------------|
| 1 | 2 | 3 | 4 | 5 |
| 1. | My job requires that my spouse do most of the work around the house. | | | |
| 2. | My job overlaps into my personal and family life. | | | |
| 3. | I think about my patients when I am at home or involved in leisure activities. | | | |
| 4. | I have control of my working hours. | | | |
| 5. | I spend enough time with my spouse. | | | |
| 6. | I am proud to tell others that I am part of the medical profession. | | | |
| 7. | My spouse is proud to tell others he/she is married to a physician. | | | |
| 8. | I use my title ("Dr.") when I give my name (for example, when making travel arrangements). | | | |
| 9. | Most of my personal life goals are job-oriented. | | | |
| 10. | I am satisfied with my profession. | | | |
| 11. | My spouse is satisfied with my profession. | | | |
| 12. | I am satisfied with my performance as a physician. | | | |
| 13. | I feel stress due to my job. | | | |
| 14. | My spouse feels stress due to my job. | | | |

APPENDIX H

Physicians' Spouses' 14 Questions Assessing Work/Family Overlap.

Please indicate your level of agreement or disagreement on the following items.

- | Strongly
Agree | Mildly
Agree | Neither Agree
nor Disagree | Mildly
Disagree | Strongly
Disagree |
|-------------------|---|-------------------------------|--------------------|----------------------|
| 1 | 2 | 3 | 4 | 5 |
| 1. | My spouse's job requires that I do most of the work around the house. | | | |
| 2. | My spouse's job overlaps into our personal and family life. | | | |
| 3. | My spouse thinks about his/her patients when at home or involved in leisure activities. | | | |
| 4. | My spouse has control of his/her working hours. | | | |
| 5. | My spouse spends enough time with me. | | | |
| 6. | I am proud to tell others that I am married to a physician. | | | |
| 7. | My spouse is proud to tell others he/she is a physician. | | | |
| 8. | My spouse uses his/her title ("Dr.") when giving his/her name (for example, when making travel arrangements). | | | |
| 9. | Most of my spouse's personal life goals are job-oriented. | | | |
| 10. | I am satisfied with my spouse's profession. | | | |
| 11. | My spouse is satisfied with his/her profession. | | | |
| 12. | My spouse is satisfied with his/her performance as a physician. | | | |
| 13. | I feel stress due to my spouse's job. | | | |
| 14. | My spouse feels stress due to his/her job. | | | |

APPENDIX I

Physician's Background Information

1. What is your age?
_____ AGE
2. What is your sex? (Circle one)
(1) FEMALE (2) MALE
3. What is your present relationship status. (circle one)
(1) MARRIED
(2) SEPARATED
(3) REMARRIED (if remarried, how many times: _____)?
(4) OTHER (Please specify)_____.
4. How many years have you been married to your current spouse?
_____ YEARS MARRIED
5. How many children do you have? (include adoptions)
_____ NUMBER OF CHILDREN
6. How many children do you have currently living at home?
_____ NUMBER OF CHILDREN AT HOME
7. Please indicate the number of children you have in each age group.
_____ UNDER 5 YEARS OF AGE
_____ 5 TO 13
_____ 14 TO 18
_____ 19 TO 24
_____ 25 AND OLDER

8. My religious affiliation is:

- (1) None
- (2) Jewish
- (3) Protestant
- (4) Catholic
- (5) Other (Please indicate) _____

9. How often do you attend church?

- (1) NEVER
- (2) ONCE A YEAR
- (3) TWO OR THREE TIMES A YEAR
- (4) ONCE A MONTH
- (5) ONCE A WEEK

10. If you have spiritual or religious beliefs, how important are these beliefs to you? (circle one)

- (1) EXTREMELY UNIMPORTANT
- (2) SOMEWHAT UNIMPORTANT
- (3) NEITHER IMPORTANT NOR UNIMPORTANT
- (4) SOMEWHAT IMPORTANT
- (5) EXTREMELY IMPORTANT
- (6) UNCERTAIN

11. What is your predominant racial heritage?

- (1) Caucasian
- (2) Native North American Indian
- (3) Black
- (4) Asian
- (5) Hispanic
- (6) Other (Please specify)

12. What was your before-tax income for last year. (Circle one)

- | | |
|-------------------------|---------------------------|
| (1) Less than \$20,000 | (6) \$100,001 to 120,000 |
| (2) \$20,001 to 40,000 | (7) \$120,001 to 140,000 |
| (3) \$40,001 to 60,000 | (8) \$140,001 to 160,000 |
| (4) \$60,001 to 80,000 | (9) \$160,001 to 180,000 |
| (5) \$80,001 to 100,000 | (10) \$180,001 to 200,000 |
| (11) Above \$200,000 | |

13. If your spouse is employed, what was your spouse's before-tax income for last year. (Circle one)

(1) Less than \$20,000	(6) \$100,001 to 120,000
(2) \$20,001 to 40,000	(7) \$120,001 to 140,000
(3) \$40,001 to 60,000	(8) \$140,001 to 160,000
(4) \$60,001 to 80,000	(9) \$160,001 to 180,000
(5) \$80,001 to 100,000	(10) \$180,001 to 200,000
(11) Above \$200,000	

14. Please indicate which of the following is your area of medical specialty. (Circle one)

(1) Allergy/Immunology	(12) Ophthalmology
(2) Anesthesiology	(13) Orthopedic
(3) Cardiology	(14) Otorhinolaryngology
(4) Dermatology	(15) Pathology
(5) Emergency Medicine	(16) Pediatrics
(6) Family/General Practice	(17) Physical Medicine/ Rehabilitation
(7) Hospital Administration	(18) Plastic Surgery
(8) Internal Medicine	(19) Psychiatry
(9) Neurology	(20) Public Health
(10) Neurosurgery	(21) Radiology
(11) Obstetrics/Gynecology	(22) Urology

(23) Surgery (please specify) _____
 (24) Other (please specify) _____

15. Please indicate where you practice the majority of your medicine. (Circle one)

(1) Hospital setting
 (2) Private/Solo practice
 (3) Medical clinic (Group Practice)
 (4) Medical teaching facility
 (5) Other (please specify) _____

16. How many years, since completing interning, have you been practicing medicine? (If currently an intern, mark space under years practicing medicine).

_____ Years practicing medicine.
 _____ currently interning

17. Approximately how many hours per week do you work? (This would include work-oriented activities such as patient contact, consulting, doing medical records, reading journals, public speaking, etc.) (Circle one.)

_____ HOURS PER WEEK I WORK

18. Please indicate approximately how many hours per week you are "on-call".

_____ HOURS ON-CALL

19. Briefly describe your type of "on-call" schedule.

20. Approximately what percentage of your professional time is spent in direct patient care?

_____ Percentage of time in direct patient care.

21. Many physicians report that their spouse assists them directly in their medical practices. If your spouse assists you in your medical practice what type of assistance is preformed? (Circle all that apply.)

(1) Receptionist
(2) Accounting (billings, etc.)
(3) Nursing
(4) No assistance in medical practice
(5) Other (please specify) _____

22. If your spouse assists you in your medical practice, how many hours a week do you estimate your spouse spends in that role? (Circle one.)

_____ average hours per week spouse assists in medical practice.

24. Is there anything else you would like to tell us concerning work and family life among physicians and their families. If so, please use this space for that purpose.

Your contribution to this effort is greatly appreciated.

APPENDIX J

Physician's Spouse's Background Information

1. What is your age?

_____ AGE

2. What is your sex? (Circle one)

(1) FEMALE (2) MALE

3. How many years have you been married to your current spouse?

_____ YEARS MARRIED

4. How many children do you have? (include adoptions)

_____ NUMBER OF CHILDREN

5. How many children do you have currently living at home?

_____ NUMBER OF CHILDREN AT HOME

6. Please indicate the number of children you have in each age group.

_____ UNDER 5 YEARS OF AGE

_____ 5 TO 13

_____ 14 TO 18

_____ 19 TO 24

_____ 25 AND OLDER

7. What are the total years of education that you have completed (include elementary, junior high, high school college, or graduate etc.)?

_____ YEARS OF EDUCATION

8. My religious affiliation is: (Circle one).
- (1) None
 - (2) Jewish
 - (3) Protestant
 - (4) Catholic
 - (5) Other (Please indicate) _____
9. How often do you attend church?
- (1) NEVER
 - (2) ONCE A YEAR
 - (3) TWO OR THREE TIMES A YEAR
 - (4) ONCE A MONTH
 - (5) ONCE A WEEK
10. If you have spiritual or religious beliefs, how important are these beliefs to you? (circle one)
- (1) EXTREMELY UNIMPORTANT
 - (2) SOMEWHAT UNIMPORTANT
 - (3) NEITHER IMPORTANT NOR UNIMPORTANT
 - (4) SOMEWHAT IMPORTANT
 - (5) EXTREMELY IMPORTANT
 - (6) UNCERTAIN
11. What is your predominant racial heritage? (Circle one)
- (1) Caucasian
 - (2) Native North American Indian
 - (3) Black
 - (4) Asian
 - (5) Hispanic
 - (6) Other (Please specify) _____
12. If you are employed, what was your before-tax income for last year. (Circle one)
- | | |
|-------------------------|---------------------------|
| (1) Less than \$20,000 | (6) \$100,001 to 120,000 |
| (2) \$20,001 to 40,000 | (7) \$120,001 to 140,000 |
| (3) \$40,001 to 60,000 | (8) \$140,001 to 160,000 |
| (4) \$60,001 to 80,000 | (9) \$160,001 to 180,000 |
| (5) \$80,001 to 100,000 | (10) \$180,001 to 200,000 |
| (11) Above \$200,000 | |

13. What was your spouse's before-tax income for last year. (Circle one)

- | | |
|-------------------------|---------------------------|
| (1) Less than \$20,000 | (6) \$100,001 to 120,000 |
| (2) \$20,001 to 40,000 | (7) \$120,001 to 140,000 |
| (3) \$40,001 to 60,000 | (8) \$140,001 to 160,000 |
| (4) \$60,001 to 80,000 | (9) \$160,001 to 180,000 |
| (5) \$80,001 to 100,000 | (10) \$180,001 to 200,000 |
| (11) Above \$200,00 | |

14. If you are employed, what is your occupation?

- (1) Please specify _____
(2) Not Applicable

15. If you are employed, approximately how many hours per week do you work?

_____ Hours per week employed

16. Many physicians report that their spouses assist them directly in their medical practice. If you assist your spouse in the practice of medicine what type of work do you do? (Circle all that apply.)

- (1) Receptionist
(2) Accounting (billings, etc.)
(3) Nursing
(4) No assistance in medical practice
(5) Other (please specify) _____

17. If you assist your spouse in medical practice, how many hours a week do you spend in that role? (Circle one.)

_____ Hours per week assisting in medical practice

18. Are you involved in community service or volunteer work? (Circle one.)

- (1) yes
(2) no

19. If you are involved in community or volunteer service, approximately how many hours per week do you perform these services.

_____ Hours per week in service involvement

20. Please indicate which of the following is your spouse's area of medical specialty. (Circle one)

(1) Allergy/Immunology	(12) Ophthalmology
(2) Anesthesiology	(13) Orthopedic
(3) Cardiology	(14) Otorhinolaryngology
(4) Dermatology	(15) Pathology
(5) Emergency Medicine	(16) Pediatrics
(6) Family/General Practice	(17) Physical Medicine/ Rehabilitation
(7) Hospital Administration	(18) Plastic Surgery
(8) Internal Medicine	(19) Psychiatry
(9) Neurology	(20) Public Health
(10) Neurosurgery	(21) Radiology
(11) Obstetrics/Gynecology	(22) Urology

(23) Surgery (please specify)

(24) Other (please specify) _____

21. Please indicate the working environment your spouse currently practices the majority of his/her medicine. (Circle one)

(1) Hospital setting
 (2) Private/Solo practice
 (3) Medical clinic (Group Practice)
 (4) Medical teaching facility
 (5) Other (please specify) _____

22. How many years, since completing interning, has your spouse been practicing medicine? (If your spouse is currently an intern, mark space CURRENTLY INTERNING.)

_____ Years practicing medicine.
 _____ Currently interning

23. Approximately how many hours per week does your spouse work? (This would include work-oriented activities such as patient contact, consulting, doing medical records, reading journals, public speaking, etc.)

_____ Hours per week spouse works

24. Please indicate approximately how many hours per week your spouse is "on-call".

_____ hours on-call

25. Approximately what percentage of your spouse's professional time is spent in direct patient care? (Circle one.)

- (1) 75% and above
- (2) 50% to 75%
- (3) 25% to 50%
- (4) Below 25%

26. Is there anything else you would like to tell us concerning work and family life among physicians and their families. If so, please use this space for that purpose.

Your contribution to this effort is greatly appreciated.

APPENDIX K

Medical Specialties

The 23 Medical Specialties were combined into 10 categories that closely represented one another. This was done in order to assist the limitations of computer software and to increase the sample size in the categories.

THE COMBINED SPECIALTIES, 10 REMAINING CATEGORIES

SPECIALTY		PHYSICIANS' N	SPOUSES' N
1.	Anesthesiology:	16	16
2.	Emergency Medicine	15	13
3.	Family/General Practice	58	54
4.	INTERNAL MEDICINE:	74	58
	Internal Medicine	63	63
	Cardiology	6	4
	Neurology	4	7
5.	OBGYN:	23	22
	Obstetrics/Gynecology	17	16
	Urology	5	6
6.	Pediatrics	20	17
7.	Psychiatry	15	12
8.	Radiology	13	14
9.	SURGEONS:	48	46
	Neurosurgery	3	3
	Plastic Surgery	3	1
	Ophthalmology	14	14
	Orthopedic	13	12
	Surgery	15	16
10.	MISCELLANEOUS:	23	19
	Allergy/Immunology	1	1
	Dermatology	7	5
	Otorhinolaryngology	2	2
	Pathology	8	7
	Physical Medicine/ Rehabilitation	3	3
	Public Health	2	1
Grand Total		305	287