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SEX, AGE, AND THE LEVEL OF INVOLVEMENT IN  
WORK AND FAMILY ROLES OF PEDIATRICIANS

by

Sarah E. Brotherton

A Dissertation Submitted to the Faculty of the Graduate School  
of Loyola University of Chicago in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Philosophy

April

1988



Sarah E. Brotherton

Loyola University of Chicago

SEX, AGE, AND THE LEVEL OF INVOLVEMENT IN  
WORK AND FAMILY ROLES OF PEDIATRICIANS

The management of work and family roles of a sample of 2,110 male and female pediatricians was assessed with a self-administered questionnaire. Although there are now more women in the traditionally male-dominated profession of medicine than ever before, it was nonetheless hypothesized that the level of involvement in work, the family, and the intrusion of family demands into the work role (work role permeability) would follow traditional gender role expectations for these pediatricians. This hypothesis was supported. Female pediatricians were more involved in the family role, less involved in the work role, and experienced more work role permeability than male pediatricians. It was expected, however, that male and female pediatricians of different ages would be managing their work and family roles differently, age cohort capturing generational differences in attitudes and behavior towards work, family, and parenting. This interaction between sex and age cohort did not emerge. The presence of children proved to be the major determinant effecting the level of involvement in family, work, and work role permeability. Parents of either sex proved to be equivalent in family



role involvement, and were readily distinguishable from childless pediatricians. Male pediatricians with children were highly involved in the work role, while women with children were well below the average in their work involvement. Childless pediatricians of either sex were comparable, falling between mothers and fathers in their level of involvement in the work role. The presence of children effected work role permeability only for women. Childless pediatricians and male pediatricians with children were roughly equal in their level of work role permeability, which was significantly less than that of mothers.

These results suggest that, in spite of the recent influx of women into medicine, women still lag behind men in the work sphere. The primary reason for this lag is their involvement in the maternal role. Medicine is a fairly conservative profession, and therefore female pediatricians may be further behind other professional women in sorting out work and family responsibilities, while male pediatricians with children remain entrenched in the traditional breadwinner role.

## ACKNOWLEDGEMENTS

I thank the director of my Committee, Dr. Linda Heath, as well as the other members of my committee, Dr. Emil Posavac, Dr. Jill Reich, and Dr. Susan LeBailly for their helpful advice and encouragement. In addition, I am most grateful to the American Academy of Pediatrics, and the Academy's Department of Research, for allowing me the use of the dataset of pediatricians, as well as providing me the opportunity for learning a great deal about survey design and research.

Support, advice, and encouragement by Kerry Smith, Donna Van de Water, and Caroline Ross were greatly appreciated. Stephen Rude provided the expertise for creating the figures, for which I am most grateful. Finally, I would like to thank my husband Jim for his help and understanding, and my sons Alan and Charlie for their dissertation distracting abilities.

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## INTRODUCTION

### Statement of the Problem

In the past two decades there has been a dramatic increase in the number of employed women. While women have always had jobs, they have typically participated in the labor force during certain life stages that, by definition, did not allow paid employment to interfere with childbearing and childrearing. Women worked before marriage and children, and then reentered the labor force after the children had grown up. What is different these days is the labor force participation of women who not only have children at home, but have very young, preschool children.

While societal gender role attitudes and employment opportunities have changed to permit the increase in working mothers, family life has not witnessed as dramatic a change. Wives with full-time career commitments are still the principal caretakers of children and carry the burden of home chores. Husbands of working women have increased their participation in home responsibilities, but not in an amount necessary to achieve equity with their working wives. As a result, women have had to manage more "role conflict" than men do, as men's family and work roles have historically not overlapped to any degree and have not increased measurably. Women, on the other hand, have had to deal with increased involvement in multiple roles and role conflict by either accommodating family needs to the pursuit

of their careers, or accommodating their career in order to meet their families' needs, or a little of both. The accommodation has typically led to more career compromises than family compromises.

An additional problem for women is that family needs often interfere with their work obligations. This is allowed to happen as society expects the family role to take precedence over the work role for women. In the literature this is described as a permeability in the women's work role. Sometimes intrusions into the work role are obvious, such as when women drop from full-time to part-time jobs in order to spend more time at home with their children. Intrusions can be more subtle, as in the situation where a woman may not accept many travel assignments in her job in order to be with her family. The most insidious example of this role permeability is when the woman is not offered travel assignments because of the expectation that she will turn them down on behalf of her family's needs. Because of these expectations, women have rarely been in occupations of power and authority. Those who did have such positions often had minimal family role involvement as they were either unmarried, or if married, childless. Now that women are entering more occupations traditionally held by men, they must not only handle their increased role involvement, but also the stereotyped expectations that they will not be as committed to their careers as men, due to their responsibility to the family.

As with most professional working women, female physicians find themselves trying to manage both career and family life. The degree of accommodation in both career and family life for female physicians

may be more drastic than for non-medical professional women, as medicine is not only a male-dominated field but is also one demanding years of training and a high level of commitment. Role permeability is a particularly important issue in the field of medicine, as the profession is often characterized by "selfless" devotion, tireless energy and a willingness to sacrifice personal life in order to help patients. This is an example of role permeability in the extreme, but in the opposite direction of the permeability that often effects women's roles. Allowing the work role to intrude into the family role is typical of the situation for American men, and is exemplified by the medical profession. Now that there are more female physicians than ever before—the vast majority in their marrying and childbearing ages—it is particularly timely to study how the family and work roles are managed by these women physicians, especially in comparison with male physicians. In addition, a contrast in how such roles are managed by younger and older physicians may highlight recent changes in attitudes towards maternal employment and the increase in services geared towards dual-earner families.

### Purpose and Hypotheses

This study examines the family and work roles of a sample of male and female pediatricians, and in particular sex differences in the degree to which family obligations have intruded into the work role. The choice of pediatricians, as opposed to physicians of another specialty, allows us to examine such family and work roles in a specialty that has long been considered appropriate for women.

Female pediatricians will not have been ground breakers, enduring discriminatory practices and attitudes, and will have been less likely to have had to make the extreme "either-or" decision of career versus marriage and family. Therefore, among female physicians, pediatricians will be more likely to have been involved in negotiating family and work roles than, for example, female surgeons.

Gender is not the only variable of interest in a study of family roles. Age may be an influential mediator of the effects of family obligations on a physicians's career. Older female pediatricians may have been more willing to forsake professional status for family life, or, conversely, to give up family life for professional aspirations. Younger pediatricians today, both men and women, may have more viable options for managing multiple demands.

In accordance with the concept of role permeability and current findings on work and family roles of men and women, hypotheses tested concerned the level of involvement of men and women in these roles, the amount of intrusion by family needs into the work role, and finally, age differences in family and work roles and their permeability. These hypotheses included: 1) women and men's family roles are different from each other, e.g., women are more likely to be responsible for housework, men are more likely to have a spouse working in the home, and so forth; 2) women and men's work roles are also different, reflecting a greater involvement for men, e.g., they work more hours per week. Women's work role, on the other hand, may reflect a lower status in the profession, e.g., a lower salary, or a less prestigious position, and 3) that the family role makes more

intrusions into women's work role than into men's work role, e.g., number of career interruptions for family reasons. The fourth hypothesis acts as a codicil for each of the first three hypotheses, and as such states that sex differences found in the testing of the hypotheses will be mediated by age cohort, e.g., younger women may have fewer family responsibilities or career interruptions than older women, or younger men may be more involved in the family role than older men. In summary, this study describes the work and family roles of a sample of pediatricians, and explores the possible effects of age on how these roles are managed. , Such a description of the interrelationship of work and family roles of younger pediatricians can help physicians in training to prepare better for their eventual immersion into these roles. The comparison of age cohorts allows for a possible revision of the concept of role permeability, incorporating generational differences in the management of permeable roles.

## REVIEW OF RELATED LITERATURE

The following literature review describes current social expectations that lead to asymmetrically permeable roles for men and women, and the research that has documented one aspect of this role permeability. The family role involvement of husbands and wives in dual-earner families will then be discussed. As this study examines the work and family roles of physicians, and in particular the intrusion of the family role into the work role—most keenly felt by women—female physicians and their personal and family characteristics will be described. A discussion of the various career differences found between male and female physicians and the effect of age on these differences will then follow. Finally, the family and career expectations of young physicians and the possible differences between younger and older physicians in the amount of role permeability will be discussed. The literature review will conclude with the hypotheses of this study.

### Permeable Boundaries and the Cultural Mandate

Since the 1960's the number of working women, and in particular, working mothers, has increased significantly. In 1960, 18.6% of married women with children younger than age six were in the labor force (Blau & Ferber, 1986). Families with both spouses earning wages represented 45% of all married couples in 1968. By 1980, these families made up over half of all families, while the traditional

family with the husband as sole earner made up only 31% of married couples (Hayghe, 1982). In 1984, 65.4% of married women with school age children were working, two-thirds of whom were working full-time (Hoffman, as cited in Vondracek, Lerner, & Schulenber, 1986).

In spite of the substantial changes in women's roles in the marketplace, they have yet to achieve equity with men. Nevertheless, there is greater equality between the sexes in their work roles than can be found in the family roles of working husbands and wives in the home. Traditional Western culture's division of labor in the home has been described by Coser and Rokoff (1971) as a "cultural mandate" for women. This mandate prescribes that the primary allegiance of women is to the family. Once this mandate is granted, women who desire to have careers are said to have a "conflict." This conflict is seen as a source of disruption in the social order, as it involves allegiance to either their family or their career. There is not a similar conflict for men, as "after all, men are fully engaged in their occupations without fearing, and without being told, that they are not committed to their families" (1971, p. 535). This conflict is not only internal, resulting in guilt feelings on the part of the woman, and doubt on the part of her employer and society, but manifests itself physically in "emergency" situations. Emergencies occur when a role system claims time and effort that is normally assigned to another role system, e.g., a child is sick and someone must take care of him or her, or an deadline problem at work must be taken care of during the weekend. There is a preferred cultural pattern for who takes part in these emergencies. Women typically give priority to the



family, while men give priority to their occupations. Coser and Rokoff describe the American family as a "greedy institution" that demands total allegiance of women (1971).

After reviewing the literature on the effects of women's employment on the level of performance of men and women in household labor, Pleck (1977) concluded that, although employed women reduce their family work compared to non-employed women, this reduction is not equal to the increased time in employment, and therefore total time spent in work and family roles is much greater for employed wives than for non-employed wives. In addition, there is very little variation in male family roles associated with wives' employment status. Furthermore, there is a strong inverse relationship for women between hours spent in paid work and on housework, in that the more a woman works for pay, the less time she spends on housework. This relationship is not evident for men. Gender accounts for much more of the variance in an individual's time in family work than does employment. The level of involvement in their work role is no longer the primary determinant of men's limited family role.

Pleck maintains that there is a strong, culturally determined buffer between the work and family roles for men, which serves to limit the effect of changes in wives' roles on husbands' roles (1977). Traditional gender role socialization as well as differential training in family chores have produced the sex-segregated activities of housework and childcare. Husbands may perceive that family work needs to be done, but do not perceive this work as appropriate or suitable for them, thus insulating their family role from the changes in their

wives' family role. As a result, although wives reduce involvement in their family role, husbands are unlikely to increase theirs (Pleck, 1977).

Following the the tradition of the cultural mandate, asymmetrically permeable boundaries between work and family roles have developed for women, much as these boundaries have existed for men for years (Pleck, 1977). For women this allows the demands of the family role to intrude into the work role, more than the work role can intrude into the family role. Thus it is the wife who is called when the child is sick. This intrusion is an important part of negative stereotypes about women workers, which will be discussed below. It also generates a fair amount of stress for women as family norms conflict with occupation norms. For men, the boundaries are permeable in the reverse direction, allowing them to "take work home," both literally and figuratively. Husbands must manage their families so that family responsibilities do not interfere with their work role.

Other researchers have come to similar conclusions. Hall (1972) suggests that men do not experience strain from multiple roles because their work and family roles are salient at different times, or sequentially. Family responsibilities do not "exist" until work responsibilities are completed. The conflict that working women experience is a result of simultaneously operating roles. As women bear the primary responsibility for the children, they are more likely to face demands from these "role senders" than are men. Because of the cultural mandate, "there are few constraints on their <childrens' and husbands'> ability to express these demands openly and strongly"

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(Hall, 1972, p. 474), even in the work setting. This allows both the family and work roles of women to coexist.

Johnson and Johnson (1976) explain role strain in working women as a result of "role proliferation," the additive combination of disparate and dissociated roles. Men are able to "compartmentalize" their roles, placing a sharp distinction between the competing home and work roles, which allows an orderly transition from one role to another (Johnson & Johnson, 1976, 1980). According to Johnson and Johnson, women have difficulty suppressing worries about home chores and children's problems while on the job—a phenomenon popularly called "psychological mothering"—and therefore suffer from role strain. However interpreted, there is a high normative expectation for women to continue performing domestic functions even when fully employed. How else can the seemingly amusing anecdote, told by Nadelson and Eisenberg (1977) be explained: a distinguished woman professional at the podium about to give a scientific paper, is suddenly distracted by the thought, "Oh my God, I forgot to buy toilet paper" (p. 1073). Anecdotes abound regarding this intrusion of family responsibilities into the work role of women. The following section reviews the studies that have measured such role permeability for both men and women.

Direct measures of role permeability. Greenhaus and Beutell (1985), in their review of the literature on conflict between work and family roles, noted the lack of research on role behaviors that interfere with the prescribed behaviors of a particular setting. Most conflict research has looked at conflicts between time spent in roles,

or at the psychological and physical strain of multiple roles. Johnson (1983) has made the most thorough study of interfering role behaviors to date. Unfortunately for the purposes of this study, her research looked only at conflicts between the work and childcare responsibilities of divorced working mothers. Johnson explicitly asked these women what they would do in particular work-family conflicts. The intrusion of work demands into the family role was measured with items such as: "Mother has a change in work hours and cannot be home for a meal." The reverse role permeability was measured by questions such as: "Child has an important activity for mother to go to during work hours." Johnson found that the asymmetrically permeable boundary rarely allowed work to interfere with the family role. Considering that these mothers worked an average of 40 hours per week, they dealt with a surprising number of childcare conflicts themselves, rather than having relatives or others manage the problem. These women were primarily in clerical or sales positions which did not require travel or overtime, thus enabling them to handle the conflicts themselves (Johnson, 1983). It is likely that women in higher commitment occupations would have to rely more on others in these situations.

Hiller and Philliber (1986) asked 489 couples for their perception of their involvement in various household tasks, as well as how much they felt their spouses participated. In general, spouses tended to claim more personal involvement than their partners perceived. Regarding tasks that can interfere with work role performance, husbands were more likely to believe that they and their

wives split the responsibility equally, while wives were more likely to see themselves with the major responsibility. Nearly three-quarters of the wives said they took their children to the doctor and 23% said that the job was equally divided. One-third of the husbands said that the job was performed by both equally. According to the wives, 62% of the wives stayed home with sick children, 36% said both husband and wife were likely to stay home. However, 48% of husbands maintained that they were as likely to stay home as their wives. The highest level of agreement regarded the task of getting the children ready for school. Eighty-two percent of the wives said the wife performed this task, and 11% said the task was shared. Sixteen percent of the husbands said the task was shared. The heaviest involvement by the husbands in any of the listed childcare activities was for helping with homework, where 11% said they alone were responsible for this activity. Unfortunately, these analyses are confounded by the presence of single-earner couples. The couples (the majority of which were husband only employed) made up 40% of the sample, so it is difficult to assess how many employed mothers participated in these activities and to what degree.

Crouter (1984) asked a sample of 55 blue collar workers about "spillover" from family life into work life. Positive spillover for these workers generally included the supportive nature of family relationships, and useful interpersonal skills and attitudes acquired at home and put to use at work. Negative spillover was generally manifested as low energy, moodiness, or the inhibiting influence of the family. Family circumstances were related to spillover, but only

for women. Mothers had more negative spillover than fathers, who reported as much negative as positive spillover. Negative spillover was much more likely for women with children younger than age 12. The effects of negative spillover for these women were absences from work, tardiness, inattentiveness, inefficiency, or the inability to accept new responsibilities at work.

Most studies, when describing work-family role permeability, are not as specific in their measures as those used in the above studies. Holahan and Gilbert (1979) measured the conflict experienced by 28 dual-earner couples with items such as: "Wanting to be a 'good' spouse vs. being unwilling to risk taking the time from your professional work," and "Spending most evenings on work-related activities vs. spending most evenings with your family." For parents of both sexes there were no differences in the amount of conflict aroused by the professional vs. spouse roles, or the professional vs. parent roles. The authors suggested that the lack of gender differences could be due to the overall profeminist attitudes of the sample, the high levels of career commitment and aspirations for both sexes, and the high level of spouses' emotional support for the respondents' careers. Couples with similar levels of investment in their careers would seem equally likely to experience conflict between work and family roles.

Pleck (1985) asked the dual-earner couples who responded to the 1977 Quality of Employment survey how often they "thought about spouse or children when busy doing other things" and "thought about your job when busy doing other things." These questions were used as measures

of family and work role involvement. Both men and women were highly involved in the family role, however women stated they spent significantly more time than men did thinking about their families. Men and women were equally likely to think of their jobs when otherwise engaged. This involvement was considerably lower than the family involvement. Men were significantly more likely to state they thought about their families less than work, but this was a very small proportion of the respondents (11% of the men, six percent of the women). The majority of men and women said they thought about their families more than work.

Based on these few and sometimes not totally applicable studies, it would appear that women do experience greater behavioral intrusion of the family role into their work role than do men, or at least perceive more intrusions. Most research on role permeability does not involve specific behaviors, but operationalizes role permeability with questions about family and work role "interference" or "conflict." The inference is made that if there is interference or conflict, it must be because of role permeability. These studies will be discussed below.

Indirect measures of role permeability. Measuring the degree of interference between work and family life, and the amount of dissatisfaction about excessive work hours interfering with family life, Staines and Pleck (1986) found that flexibility of a worker's schedule can buffer the negative effects on family life of having a nonstandard work schedule. A nonstandard work schedule is one that is not Monday through Friday, or not 8:00/9:00 AM to 5:00 PM. The



authors found that flexibility of schedule provides more protection against the negative effects of a nonstandard work schedule on the family life of women than for men, a finding they contend supports the view that "working women are particularly vulnerable to interruptive family demands and that, in consequence, schedule flexibility offers women a much needed opportunity to meet their job requirements while simultaneously managing their disproportionate share of family responsibility" (Staines & Pleck, 1986, p. 153).

The adverse effects of role permeability on women do not have to be a direct result of their own employment. Kingston and Nock (1985) found that working women experienced greater interference between their jobs and family lives the more hours their husbands worked. A longer work day for the husband was associated with greater satisfaction with his family life. Women did not get similar satisfaction from the husband's longer day, as they were left with the burden of reconciling the couple's work schedule and family life. Keith and Schafer (1980) also found the level of work-family conflict for working women to be directly related to the number of hours husbands worked.

Role conflict is not, however, the sole province of women. Greenhaus and Kopelman (1981) have found that husbands of managerial or professional women experience more intense work-family conflict than do husbands whose employed wives are not managers or professionals. They speculate that these women work enough hours to put pressure on the husbands to participate more in family activities. This increased involvement may conflict with the husbands' work

responsibilities. Pleck (1977) predicted that without a reduction in the typical level of involvement in the work role, men would soon be experiencing greater work-family conflict as a consequence of their higher involvement in the family, which is in turn a result of their wives' increased involvement in work. Barling (1986) has also found interrole conflict among a sample of fathers.

Sekaran (1983b), although directly mentioning Pleck's (1977) concept of asymmetrically permeable boundaries, measures this variable in such a manner as to obscure the meaning. Sekaran measures "Integration" with items such as: "My spouse and I discuss our career and family goals and expectations" and "I make it a policy to leave work problems at work and not let them disturb my peace at home." Someone scoring high on Integration would agree with the former item, and disagree with the latter. Sekaran's items that form the Integration scale present such work and family role integration as a positive aspect of family life, emphasizing communication between spouses. There is not an item such as, "I make it a policy to leave my family problems at home and not let them disturb my concentration at work." Disagreeing with this statement could be conceived as high Integration, yet this form of Integration has very different implications than that represented by the former items, and would more directly effect the work role than the family role.

Although men and women were similar in their Integration scores (Sekaran, 1983a), Integration may mean something different for men and women. Items measuring Integration combine as a consequence of factor analysis with variables such as satisfaction with employment

facilities, job involvement, extra hours spent on the job, time spent at home on job-related work and income, but only for men. Integration failed to combine with any variable, work related or otherwise, for women. Integration appears to enhance men's job involvement and job satisfaction, and yet does not have a similar effect for women. It is possible that women with high levels of Sekaran's Integration may also have high levels of the untapped form of work and family life integration, i.e., family issues inserting themselves into the work role, which may not enhance job involvement and may in fact decrease it.

The fact that Sekaran was unable to tease out these different facets of Integration is indicative of the asymmetrical quality of role permeability, i.e., what's good for the gander isn't necessarily good for the goose. The current family roles of working men and women, and the level of involvement in these roles, will be discussed below. The difference between the sexes in the performance of these roles may help explain why bringing even a small amount of the woman's family role into the workplace can have adverse effects on her work role performance, while men's family roles may have no effect on their work roles.

#### Family Role Involvement in Dual-earner Families

When the increase in the number of dual-earner families became evident, there was a growing interest in how these families were sorting out their home responsibilities and obligations. Popular press implied that one of the reasons women were able to achieve in

the working world was because their husbands were picking up the slack in home chores. Equality in the marriage was considered to be a rapidly approaching reality. In spite of the media, it was soon found that it was difficult to predict husbands' involvement. Perrucci, Potter and Rhoads (1978) found that the wife's availability to perform housework, the number of children in the family, or work responsibilities for either spouse did not affect husbands' participation in the home to the extent that the husbands' own gender role ideology did, which was the strongest determinant.

In a 1978 study of married women professors (Yogev, 1981) there were large discrepancies between the estimated number of hours per week each spouse spent on their career, housework, and childcare. The presence of children proved to be a major factor differentiating the spouses, yet even for childless couples the differences were not insubstantial. Husbands were estimated to spend approximately 57 hours per week on their careers. Childless wives worked one-and-a-half hours less per week than their husbands. The difference for couples with children was the equivalent of an entire working day, 9.4 hours, as mothers worked approximately 48 hours per week. Childless wives spent 18.4 hours on housework; their husbands 6.3 hours. Mothers spent 24.6 hours on housework while their husbands worked in the home 8.6 hours, 1.7 hours more than their childless peers. Hours spent on childcare totalled 35.1 hours for the women, and 12 hours for the men.

Model (1982) found in a sample of 650 women of various occupations in 1978 that husbands do not necessarily do more housework when there are children in the home. She found that newlywed husbands and men retired from their jobs were more likely to work on household tasks than husbands in any family stage in between. This suggests that when the children are present, and possibly available as home laborers, fathers are doing other things in place of housework. Husbands' participation in household tasks was weakly associated with their own shorter working hours, and longer ones for their wives'. Significant variables that predicted a husband's participation were wife's gender role ideology, husband's income, employment status of the wife, and family life cycle. As the husband's income increased, his chore involvement generally decreased. The majority of Model's sample consisted of couples with very disparate incomes. Looking at the 55 couples with similar earnings (the majority of which had a combined income of less than \$20,000), she found much more participation by husbands. Unfortunately, Model did not examine wives' level of housework, preventing comparisons between husbands and wives.

Although men do not participate in housework and childcare as much as working wives, have they increased their participation in home responsibilities as a result of their wives' employment? There are several longitudinal and cross-sectional studies that present mixed findings. Comparing time use data from 1965-1966 and 1975-1976, Coverman and Sheley (1986) found no significant difference in average minutes per day for housework and childcare for men. For both data

collection periods, men spent an average of 82 minutes on housework and 14 minutes on childcare per day. What did change for men was their working hours and leisure time. Men in the later cohort worked for pay less and spent more time in leisure activities than the men of the earlier cohort. Women spent significantly fewer minutes per day on housework (324.75 to 289.77). Women did not change in the amount of paid work, yet also spent more time in leisure activities.

The average amount of housework for men, once the effects of other variables had been controlled, actually declined over the 10 years, although by an insignificant amount. Time spent in paid work was the strongest predictor of housework time, age coming in second. Of interest here is the 1975-1976 curvilinear effect of age. Men younger than 30 spent more time on housework than men age 30 to 50, as well as spending 25 minutes more than the matching cohort of 1965-1966. This suggests a possible change, albeit small, in gender role socialization.

The more time fathers spent on the job, the less time they spent on childcare. Fathers' age was inversely related to childcare time. Men with preschool children spent more time on childcare than did men with older children. Fathers with one child younger than age four spent nearly twice as much time on childcare activities compared to similar men in 1965. Indicative of the research climate of the time, paid employment information for women was not collected in 1965-1966. However, 1975-1976 men's time in housework and childcare were not affected by whether their wives worked outside the home or not (Coverman & Sheley, 1986).

Blau and Ferber (1986) did have access to working women's hours, as well as their hours spent in housework. Comparing data for 1975-1976 to that of 1965-1966, women's combined housework and market day was of the same length, although over the week they were employed one-and-a-half hours more than previously. This was managed by reducing time spent on housework by the same amount per week. Men's time in employment was one hour less and their housework time was one hour more than men of the earlier cohort. Working wives' days were longer than the days of husbands of employed wives. The largest difference between the two sets of time-use data was found in the 25 to 44 year old age group. Men in this age group, compared to similarly aged men in the mid-1960's, spent one less hour in paid employment and added three more in the home. Women worked for wages three-and-a-half more hours and one hour less in the home than women did in the previous decade.

During the two years between 1974 and 1976, employed wives (with children) in the National Longitudinal Survey of Work Experience (Maret & Finlay, 1984) significantly decreased their time spent in grocery shopping, childcare and washing clothes. Less than half had sole responsibility for childcare, washing dishes and cleaning house. The authors suggest that there is increased task sharing in these households, but it is possible that part of the responsibility for these tasks belonged to hired help, especially in the case of childcare. It was found that the wife's relative economic contribution to the household rather than her absolute contribution decreased the likelihood of having sole responsibility for housework,

and increased the probability of sharing household tasks. This may explain Model's finding (1982) of the inverse relationship between husbands' earnings and their chore involvement, as most wives' incomes are far below their husbands'.

A more recent study (Barnett & Baruch, 1987) found that fathers with employed wives spent more proportional time (again, as opposed to absolute time) than single-earner fathers in family work overall, as well as more time in childcare tasks and on "feminine" home chores. The strongest predictor of dual-earner husbands' time in family work was the number of hours the wife worked, followed by the wife's gender role attitudes regarding the male role. The authors believe that maternal employment creates conditions under which fathers' participation becomes "easier" and less influenced by the constraints imposed by stereotypical interpretations of the male role.

Husbands' participation in the home may be increasing, but it is still often perceived as "assistance" or "moral support." Men are more likely to undertake housework jointly with another family member than alone (Gilbert & Rachlin, 1987). Often it is the wife that husbands work with, as "he may contribute positive affect, complementary labor, and/or 'unschooled,' 'raw' effort demanding supervision" (Berk & Berk, 1978, p. 459). Recent research has begun to investigate why men do not contribute more to household chores and childcare tasks. As with the role permeability of women, the cultural definitions of the male role in Western culture restricts role behavior for men to, primarily, one area—work. The work role for men is so inextricably wrapped up into the meaning of being "a man" that



it is difficult to divide up men's roles into different spheres. Cohen (1987) points out the apparent redundancy of the term "working fathers," because, according to traditional definitions, "work" is what fathers do.

Cultural constraints are not the only barriers to increased involvement in the home for men. Structural constraints in the workplace also make it difficult, as in the case of the slow acceptance of paternity leave. Cohen (1987) found that most men would like to participate more in their family roles than they were able to, but felt that their jobs limited their opportunities. "Men may appear to make that choice <limited involvement in family work>, based on their allocation of time and energy, because of their required participation in an occupation system that operates 'as if' the family did not exist" (Cohen, 1987, p. 72).

Asymmetrical role permeability thus allows men's work role to intrude into their family role (for many men, the work role defines the family role, e.g., the "breadwinner") whereas the converse is true for women. Role permeability for women is not necessarily detrimental to a woman's occupation, or to her self-concept as a "working mother." Many occupations allow the flexibility that many women need in order to perform their mother role to their satisfaction, as in the divorced mothers of Johnson's study (1983). Many otherwise career-oriented women today choose occupations that can be done in their "spare time," or in the home (Gerson, 1985). However, role permeability can be a problem if it inhibits a woman's career course. Women who choose an occupation that has historically required more

personal involvement and commitment than most occupations, i.e., medicine, would no doubt find the intrusion of the family role into the work role a handicap compared to their male peers who do not experience this version of role permeability. A description of female physicians, their marital and parental status, and the career differences between male and female physicians is discussed below, followed by a discussion of the role expectations (and their permeability) of young physicians.

### Female Physicians in Transition

As in many professions, the numbers of women training to become physicians has increased remarkably. In 1967, only 7% of all physicians were women. Between 1970 and 1985 the total number of physicians increased by 65.5%. The growth in female physicians during this period equaled 217.8%, so that now 14.6% of physicians are women. Prior to this growth period, the age distribution of female physicians closely paralleled that of the male's. As might be expected, this age distribution has now become decidedly lopsided. Over 40% of female physicians are less than age 35, compared to 22.75% of male physicians. Altogether, nearly three-quarters of female physicians today are less than age 45, versus half of male physicians (Roback, Mead, & Randolph, 1986).

Not only have their numbers changed, but their choice of specialty has also gone through some transformations. In 1967 the top five specialties of choice, in order, were pediatrics, general practice, psychiatry, internal medicine, and anesthesiology. Now,

more women are in internal medicine than any other specialty, surpassing the more traditionally feminine specialties of pediatrics and psychiatry. More indicative of the recent change in medical socialization is the increase in the number of women in specialties formerly considered out of women's domain, such as diagnostic radiology, general surgery, neurological surgery, orthopedic surgery, plastic surgery, and urological surgery. Between 1970 and 1980 these specialties grew three times or more in the number of female physicians (Roback et al., 1986).

Therefore, not only has it become more acceptable for a woman to become a physician, but it has become easier, albeit not without difficulty, for her to enter a male-dominated, prestigious specialty such as surgery. The fact that the vast majority of female physicians are in their marrying and childbearing years makes the study of the intersection of their work and family roles timely. The following section describes the extent to which female physicians become involved in family life.

#### Marriage, Family and the Female Physician

Female physicians marry at the same rate as other women, but they marry later in life and have fewer children (Wilson, 1981). Cartwright (1978) found that 75.5% of her sample of women graduating from medical school in the mid-1960's were married 10 years later. Six percent were divorced, while 18.4% had remained single. Forty percent of the married women were married to physicians, and half of the women had children. Ducker (1980) found that younger women are

more likely to try to combine marriage, family and career. Of female physicians over age 50 only half had ever married, of which half had had children. Nearly three-quarters of women younger than 50 had married, and two-thirds of these were mothers.

Schmerhorn, Colliver, Verhulst, and Schmidt (1986) also found age differences in a sample of Illinois female physicians. Eighty percent had been married, although only 62% were married at the time of the study. Half were married to physicians. Twenty percent of the ever-married women reported two or more marriages. Nearly two out of five women were childless. Almost one-third of women older than 70 reported never having been married, in contrast with women age 30 to 39, where nearly three-quarters were married.

Some female physicians' family lives are very similar to those experienced male physicians. Of the psychiatrists studied by Kashtan and Dickey (1984) women were slightly more likely to be married (79.3%) than the men (72.1%). Sixty-two percent of the women were married to other physicians, compared to 11% of the men. Eighty-four percent and 72% of the women and men had children, the average number being 1.4. The average age for both sexes at the time the first child was born was 32. Men and women were at equivalent points in their training at this time as well. It should be noted that psychiatry has traditionally been considered a "woman's" specialty, calling on skills and abilities labeled feminine, with work schedules amenable to women's family life. Women specializing in psychiatry are not unaware of this adaptability.

since female physicians are very likely to be married to a physician or another professional working full-time (Kashtan & Dickey, 1984), the need for childcare and household help would seem to be great. However, female physicians are not much different from other professional women in their degree of home chore responsibility. Female physicians working full-time have significantly more responsibility for household tasks than male physicians, and spend more than twice as much time on such tasks. Amazingly, one-third work more than 40 hours a week in the home (Pyke & Kahill, 1983).

Hired help is not used as frequently as one might expect. The majority of female physicians surveyed in the early 1970's were responsible for cooking, shopping and the planning of meals. Household cleaning and childcare were tasks that were easier to delegate to others, yet one-third and one-quarter of the women, respectively, were in charge of these activities themselves (Vacshak, 1972). In a study on women graduating from medical school between 1962 and 1982 (Phillips, 1983), 57% of the married women with children and 66% of divorced mothers had what was defined as "minimal" childcare. Household help of one day a week or less was found in 60% of the married families and one-third of the divorced families, the rest doing without paid help. Kirchner, Kossoff and Pickens (1984) also found a lack of paid outside help. Three-quarters of their sample of 336 female radiologists were married, 75% of which had children. Part-time help was employed by 41%, 11% hired full-time help, and nine percent had live-in housekeepers. The remaining 39% went without help at all; half of this group had children. Heins

(1979) found that female physicians were no more likely to hire help than male physicians, although 80% of the spouses of the men did not work outside of the home.

Thus, although involved in a very time demanding career, female physicians have attempted to enjoy family life as much as other women, and indeed may have a more traditional home life than one would expect for women pursuing a non-traditional career. The fact that more young female physicians are married and have families than older women indicates that role permeability may be more of a negotiated issue today than in the past. Nevertheless, in return for a fairly normal family life female physicians have had to settle for a different career path than their male counterparts.

#### The Career Differences of Male and Female Physicians

The structure of medicine has developed as a classic model of a profession, in which one devotes one's prime years to academic achievement or successful practice building, while at home wives are bearing and raising children, and managing home responsibilities (Rinke, 1981). This time period coincides with the female physician's childbearing years, with traditional role models pressuring women to assume the burden for childcare. While both male and female physicians complain of too many demands placed upon their time and energy, the nature of their complaints is different, reflecting asymmetrical role permeability. Men tend to regret that they are spending too much time at work, and so little time with their families. Women, conversely, express disappointment in their

inability to devote more time to their careers (Heins, 1979; Kashtan & Dickey, 1984). Because of the difference in considerations regarding the mesh of career and family life, women's choices regarding their practices, their level of productivity and income, and their level of career achievement are all affected.

Practice choices. As discussed above, there have not been great changes among women in the choice of specialties, at least among the most popular specialties. Women's choice of specialties may be guided by sex stereotypes of what is considered appropriate for women. Ducker (1978) surveyed male physicians of medical school faculties and found the most highly recommended specialties for women were pediatrics, child psychiatry, psychiatry, and anesthesiology. Pediatrics provided the greatest advantages according to these physicians because it required fewer years of training, was less competitive than other specialties, was considered to be particularly satisfying to women, and it provided patients to which women were to have a natural affinity. The selection of these specialties is particularly ironic when other specialties, such as pathology or dermatology, would allow women to have shorter, more regular work weeks, which would be advantageous when raising a family.

When asked why they chose the specialty they did (internal medicine, pediatrics, obstetrics/gynecology, psychiatry, surgery, and medical specialties), female and male residents in 1969 did not differ on the most important reason—the specialty was considered intellectually interesting and provided challenging work (Davidson, 1979). However, the second most important reason for the men was the

opportunity for more or closer patient contact, while women considered the better opportunities for limited hours of work. In general women are less likely than men to subspecialize (Weisman, Levine, Steinach, & Chase, 1980). However, the women in Davidson's study (1979) were planning on subspecialties. The most important reason for their selection, was, again, the opportunity for limiting hours of work. For men, intellectually interesting and challenging work was the primary consideration. Women are more willing to subordinate their intellectual interests in exchange for specialties compatible with family life. A possible consequence of this is the fact that married women are more likely than single women to not be in the specialty of their first choice (Ward, 1982).

Once female physicians have chosen, or had their choice restricted to a specialty, they must decide on their practice setting and arrangements. Male physicians are more likely to be working in office-based settings (62%), compared to 45% of female physicians (Roback et al., 1986; Wilson, 1981). According to Rinke (1981), 92% of male and 73.8% of female physicians are in private practice. Men are more likely to work in a solo or group practice, while women are more often working in some other setting like a clinic, government facility, or corporate setting (Bobula, 1980). In California, women are twice as likely as men to be in a prepaid medical group (Bauder-Nishita, 1980). Women are heavily represented in the hospital; 34% of women are either residents or are full-time hospital staff members while 19% of male physicians are similarly employed. Male and female physicians share similar percentages in



administration, teaching, and research (Roback et al., 1986). The women in Davidson's study (1979) were much more likely to choose to work full-time in a university or hospital setting, while the men were more likely to choose solo or small partnerships for their practice setting.

Factors rated as important in the choice of a practice location for female physicians are available hospital resources, personal life-style preferences, and career needs of spouses (Schermerhorn et al., 1986). Indeed, significantly more female physicians than males (34% versus 6%) had career plans altered by a relationship with a member of the opposite sex (Heins, 1979). For women, the adaptation included giving up residencies in order to be with spouses, not going into private practice in order to be more mobile for spouse relocation, and choosing a specialty compatible with spouses' wishes. Nearly half of the women in Ward's study (1982) had felt that their family's need for their care had affected the positions they felt they were able to apply for, and 41% felt similarly restricted by their husbands' careers. In the situation of the dual-physician marriage (comprising 50% of female physicians' marriages) there appears to be a "gentlemen's agreement" to provide employment for an invited female physician's spouse. The opposite, unfortunately, is not always true (Lorber, 1982).

Although there are roughly equal proportionate numbers of male and female physician faculty members, their numbers have only recently risen to achieve this parity. In the year 1977-1978, women made up 11.8% of medical faculties. In 1982, the percentage rose to 13.2%.

However, women are underrepresented in the higher ranks and overrepresented in the lower ranks, partly because of their recent entry into academics. Women make up 5.1% of full professors, 12.3% of associate professors, 17.5% of assistant professors, and 21.7% of instructors. The highest proportion of women is in pediatric departments, where 27% of the faculty are women. Fewer women reach administrative positions in medical schools. In 1982 women chaired 26 basic science and 28 clinical departments. Pediatrics had the largest number of female chairpersons with eight. In addition, 56 associate and 61 assistant deanships were held by women. In that same year, nearly 30% of medical students were women (Braslow & Heins, 1981; Shore, 1984; Wilson, 1981).

How do female physicians find themselves in these situations? Various authors speak of "comfort zones," "channeling," and "choice by constraint." Although single women are able to follow a career pattern similar to men's, married female physicians with families must often renounce positions of authority, power, and status. Women have to choose one option, high achievement in a prestigious specialty, over the option of marriage and family. As a consequence, women's choices of specialty, subspecialty, and work setting are made in an environment that inhibits full involvement in home and career. Therefore, they choose "women suitable" areas, such as pediatrics and HMO's, where they will not disrupt expectations of proper behavior for married women. "Not surprisingly, women will 'choose' to go where they feel comfortable, welcomed, and competent" (Bourne & Wikler, 1978, p. 438). For their own benefit they choose areas that provide

them with the least amount of role conflict, although this often means a compromise in medical interests and professional status, since less demanding specialties also tend to be less prestigious (Davidson, 1979; Yogev, 1983). Once in these positions, female physicians are further constrained by their families in the amount of time they can devote to their practice.

Productivity. Female physicians, in general, work fewer weeks per year and fewer hours per week than do male physicians. Bobula (1980) found that women worked an average of 45.9 weeks per year in 1977 while men worked 47.1 weeks. There was also a difference in hours, as women worked 43.7 hours per week and men worked 50.9 hours. Langwell (1982) finds that men spend an average of one-and-a-half hours more per week working than do women, a significant difference that holds across all specialties. The AMA (1984) however, found that female physicians work 7.9% fewer hours per week than male physicians, which translates into four hours less, if the average male physician works 50 hours weekly.

As might be expected, female physicians see fewer patients per week than do male physicians. Across all specialties this averages out to 16% fewer per week (AMA, 1984). On average, female physicians see 30-40% fewer patients per hour than do men (Reinhardt, 1981). Langwell found that women see .87 fewer patients per hour than do men, ranging from .09 for radiologists, to 1.27 for obstetrician/gynecologists (1982). Just why women see fewer patients per hour, or conversely, why men see more patients per hour, has not been sufficiently explored.

As female physicians are primarily in charge of family and home responsibilities, it is not surprising that Curry (1983) found the largest difference in hours per week between men and women came during the childbearing years, peaking at age 35. Overall, female and male physicians worked 62 and 61 hours, respectively, per week. This total included time spent on administrative tasks, and continuing medical education. The average time spent on direct medical service was 47.5 hours for men, and 43.6 hours for women. After age 45, women saw marginally more patients per week in significantly fewer hours than men. Both before age 45 and after 55, women put in more time in administrative chores and continuing medical education than men.

Ducker (1980) also looked at age differences, as well as number of children, but for women only. Women under age 50 had a higher level of professional activity than older women, even though these women were much more likely to be married and have children. Not surprisingly, they were also twice as likely to feel that their personal life suffered from their professional involvement. Women with fewer family obligations were able to achieve an even higher level of professional activity. Mitchell (1984) compared men and women on hours per week, and the effect of personal and household characteristics. By only considering office-based private practice physicians who worked at least 20 hours per week, and excluding physicians from groups greater than nine, the sample of women is really more comparable to male physicians than to many female physicians. Nevertheless, there were sex differences. Men worked 48.2 hours per week, while women worked 46.9 hours, which totals up to

a 62 hour difference in the course of a year. Women's age had no effect on the number of hours they worked per week, which is probably a result of the restricted career pattern of the sample. Men, on the other hand, reached a peak in the number of hours worked at age 44. The presence of children younger than age 18 had no effect on women's hours. Men, however, worked more hours, thus fulfilling their "provider" role. Married women worked significantly fewer hours than did single women. Marriage had no effect on men's hours. Mitchell (1984) suggests that this is an "income effect," i.e., married women are able to substitute leisure for market work, due to a higher combined family income than single women's income. What is also likely is that the married women (the average age was 50) have been subordinating their careers to their husbands' careers and maintaining somewhat traditional gender roles at home.

Kashtan and Dickey (1984) also found that the presence of children did not directly affect the hours female physicians work, in addition to finding that marital status also had no effect. Although female psychiatrists worked significantly fewer hours than men (38.4 versus 52.8), this difference was not related to marital status, number of children or any other reported characteristic of their careers or personal lives. Even without children, female psychiatrists were far more likely to work fewer than 50 hours a week. Pyke and Kahill (1983) failed to find sex differences for married physicians for hours or patients seen per week, although once again, the sample was restricted to those working full-time. Conversely, Cohen and Korper (1976) have found that the presence of children does

have a significant impact on hours of work, and the number of children had a strong negative relationship with hours of work—the more children a female physician has, the fewer hours she works. Cohen and Korper included women working a wider range of hours than Mitchell (1984), therefore it is likely this study included mothers working fewer hours expressly to spend more time with their children. Weisman and Teitelbaum (1987) found in their sample of young married physicians that the sex difference in hours worked (women working 61.8 hours, men working 69.3 hours), persisted after adjusting for family and practice-type variables. The more involved women were in household and childcare responsibilities, the fewer hours they worked professionally. The same was not true for men. The authors suggest that, as they did not measure time allocation for home responsibilities, women may be spending more time per household task than do men.

Besides the obvious but not always substantiated explanation of family responsibilities restricting women's hours, productivity may be affected by practice type. The differences in hours worked may in part be related to the setting in which physicians work. Institutional or hospital-based settings, where women frequently work, often have more limited work schedules (Cohen & Korper, 1976).

Both Curry (1983) and Bobula (1980) noted a decrease in the Productivity gap, but they offer opposing explanations for the phenomenon. Bobula (1980) found that women increased their number of hours from 41.8 hours per week in 1973 to 43.7 in 1978. This increase is almost solely responsible for the 2.4 hour difference between men

and women's hours. Curry (1983), on the other hand, states that women are not working more but men are working less, possibly representing an increased humanization in the expectations of what a reasonable work load for a physician is. As both data sets were collected in the late 1970's, it is unclear what the appropriate explanation is.

Career interruptions and "commitment." A sore point among female physicians, as with all working women, is the question of career "commitment" in the face of career withdrawals to bear and raise children. Because of these withdrawals, some in the profession consider the training of women to be a poorer investment than the training of men (Jussim & Muller, 1975). In spite of these attitudes, women in medicine have a much lower withdrawal rate than women natural scientists, engineers and secondary school teachers (Rossi, 1965), and are as likely as male physicians to be considered by the AMA as "unclassified," "inactive," or unreachable (10.9% for women, 9.9% for men) when it conducts its annual census (Roback et al., 1986).

Professional commitment is considered to be a personal characteristic taken for granted in male physicians but questioned in women, since commitment is congruent with male gender role expectations, and incongruent with female gender role expectations (Bourne & Wikler, 1978). Male medical school faculty members express stereotyped concerns about professional commitment of women medical students, however their assumptions about women are not without basis:

Men know they could not do what they do professionally if they had to do what their wives do for them in addition to their work. And men know that they could not do their work as they currently do it if they lacked a wife to keep their private lives in order.  
(Bourne & Wikler, 1978, p. 433)

Women are not blameless, as they tend to define the problem of juggling home and work roles as personal rather than a structural one, and take on the responsibility for the solution. They feel that if they ask for help, they will be proving the stereotype that they cannot manage (Bourne & Wikler, 1978).

What is the solution? Typically, women have trained in less demanding specialties, taken salaried positions in HMO's and clinics, and stayed in the lower echelons of academic medicine, all compromises. These positions can tolerate interruptions and permeable roles much better than more demanding, professionally prestigious and powerful positions, and therefore the woman's personal life is not as threatened. "How do her male colleagues see this? Incredibly, many of them choose to see this rather grim and highly responsible series of tradeoffs as frivolous or as evidence of incompetence" (Angell, 1981, p. 1161). Angell believes there should be a restructuring of medicine to recognize the special needs of the family.

Medicine so far, except for part-time residencies and matching married residents, has rejected pleas for accommodation. The primary arguments against accommodation are: 1) medicine is a calling so exacting that nothing short of tireless dedication is required to maintain skills, and therefore a compromise in time means a deterioration in quality, and 2) setting up a system in which leaves of absence and part-time work were routine (and respectable) would be inefficient. Angell (1981) repudiates both of these arguments, stating there is no evidence that female physicians are less competent



than male physicians although women work fewer hours. "Truth is that nobody knows how much time it takes to be a good doctor" (p. 1162). The second argument would make sense if there was a shortage of physicians, however, quite the opposite is true.

The result, then, is women working fewer hours with more career interruptions. Heins (1979) found that female physicians with career interruptions were much more likely to be married than women without interruptions, were more likely to have children, and were less likely to be employed full-time. Mandelbaum (1981) also studied what she called "persisters" and "nonpersisters." Persisters were older and less likely to be married. Those who were married, had married later and had fewer children than nonpersisters. Nonpersisters were personally more responsible for childcare and had more limited work hours. Persisters were happier in their marriages than nonpersisters, which Mandelbaum interprets as a result of fewer compromises in their careers. Cartwright (1978) found interruptions in training to be strongly negatively related to subsequent career satisfaction.

Part of the problem has been the consistent misconception of equating "commitment" with career continuity, a tautological error of defining people as committed because they act as if they were committed. Characteristics of commitment should be defined independently of the behavior commitment serves to explain (Laws, 1976; Quadagno, 1978). Quadagno hypothesized that the endorsement of the intrinsic values of work could define commitment. She found that physicians of both sexes between the ages of 55 and 72 were equally likely to consider the intrinsic aspects of their work more satisfying

than extrinsic aspects. Women in Quadagno's sample did not have more career interruptions than men, although the interruptions were slightly, yet not significantly, longer. While the quantity was equivalent, the quality was different. The career interruptions of these middle-aged and older men were for World War II, the Korean War, and later, illness. Although they interrupted their careers and practices for war, they remained physicians during the interruptions. Not so the women. They dropped out for raising children, some returning gradually, working part-time and then full-time as the children grew older. Effects of such role permeability on their careers were varied. As one woman said, "Women raising children will do jobs that no one else will take" (Quadagno, 1978, p. 66).

Heins also found that men and women were equally likely to have interruptions, but that the quality, again, was different. Contrary to women's situation, men who were married were much less likely to have had an interruption. "Possibly having a helping wife makes it easier for men consistently to pursue career objectives, while being a helpful wife sometimes interferes with career objectives for women" (Heins, 1979, p. 223).

Quadagno (1978) states that the rigid definition of career commitment as a full-time all consuming activity is harmful to women (and sometimes men) whose nurturant activities are disparaged. As Holstrom is often quoted:

In a curious paradox of human values men have been criticized only slightly for career interruptions in which their task was to kill off other members of the human race; but women have been severely criticized for taking time away from their profession in order to raise the next generation. (1972, p. 54)

Income. Knowing that female physicians tend to work in less distinguished specialties and settings, work fewer hours and are more likely to have career interruptions for childbearing, it is not unexpected that their income is lower than men's. The mean net income in 1977 for female physicians was \$38,194 versus \$62,470 for male physicians. The income differential, unadjusted for difference in specialties or hours, was 38.9% (Langwell, 1982). In 1982 the average annual net income (before taxes) for female physicians was \$65,200 versus \$102,000 for men, a difference of 36% (AMA, 1984). However, between 1972 and 1982 female physicians' income has increased at a slightly faster rate than men's (nine percent for women versus eight percent for men).

Several factors enter into female physicians' lower earnings. Female physicians are disproportionately in the lower-paying specialties, such as pediatrics. Once adjusting for hours per week, weeks per years and specialty, both Wilson (1981) and Bobula (1980) found that women still earned 70-80% of men's earnings. Langwell (1982) found that the hourly earnings differential unadjusted for specialty was 22.1% in 1977. The AMA found the hourly difference in 1982 to be 24% (1984). Within specialty, this difference ranged from -18.8% for anesthesiology (women earning more per hour) to 44.7% for internal medicine in 1977. The AMA did not examine the specialties in as much detail as Langwell did. Women in medical specialties, surgical specialties, other specialties, and general/family practice earned 31%, 21%, 20% and 19% less, respectively, than did male

physicians in these specialties. Although age has an effect on the earning differential between male and female physicians, the difference is still evident, which will be discussed below.

The difference in income cannot be attributed to a preference for male physicians. Langwell examined market conditions that may affect female physicians' earnings, and specifically, the demand for female doctors. She found that across all specialties (except for psychiatry) female physicians are able to charge significantly more for an office visit of a new patient and an established patient than do male physicians. Langwell concluded that female physicians are not charging higher fees in order to meet higher practice costs, since male physicians paid 44 cents in professional expenses while women paid 41.7 cents for every dollar of gross income. There was some variation by specialty in that women in internal medicine, surgery, and obstetrics/gynecology have higher expenses. Further evidence for the demand for female physicians is the time a patient waits to see the physician. Patients must wait almost two days longer to see a female physician than a male physician. This suggests that female physicians face a greater demand for their services than do men, but their shorter work week may contribute to this demand (Langwell, 1982).

Career achievement and the family. As has been implied, and possibly because of role permeability, female physicians are not as free as men are to take the positions they may desire, or maximize their level of productivity, and consequently their earnings. Overall, their level of career achievement is lower than men's when

measured by such indices as board certification rates. Female physicians are much less likely to become board certified than their male peers; 36.7% of women are certified compared to 56.3% of men (Roback et al., 1986).

Lorber and Ecker (1983) studied a matched sample of male and female physicians who graduated from medical school in 1960 and were followed through to 1976. Comparing their level of professional attainment (made up of such variables as board certification, publications, offices held in professional organizations, percentage of patients referred to them, and so forth), women were significantly less likely than men to have achieved a high level of attainment, although they were equally likely to be moderately successful. Examining several variables from medical school days, such as test scores and peer evaluations, as well as present personal characteristics, Lorber and Ecker found that there was a lack of consistent, progressive impact of these variables on subsequent professional attainment for women, as opposed to for men. Level of family responsibility had a significant negative impact on attainment for women, and had no effect for men.

Those who do achieve a high level of success are almost oddities, both in their rarity and in the degree to which they have rejected a family life. Nemir (1981), in presenting short biographies of the eight women chairing pediatrics departments in U.S. medical schools, cheerfully stated that "Three of the eight have shown that marriage and childrearing can be successfully combined with a distinguished career" (p. 183). Somehow, one would expect that more

than 38% of male pediatric chairmen are married with children. As has been discussed earlier, the substantial age difference between male and female physicians is partly responsible for the difference in personal and career characteristics. The effects of age will now be discussed in greater detail.

### Age Differences Between Male and Female Physicians

Is it possible that with changing attitudes in society, younger female physicians can combine family and career roles without the drastic compromises of the past? There is evidence that women are finding it easier to be involved in both spheres. Ward (1982) studied the careers of medical women belonging to two cohorts; those earning their degree in the years 1949 through 1951, and those who earned their degree in 1965. The results of her study show that times have changed for women, possibly making it easier for women to combine marriage, family and a demanding career, or at least now more women are willing to try. Most of both cohorts were or had been married; 55% of all those married had physicians or dentists as spouses. The older group had an average of 2.44 children, the younger cohort had 2.21 children. The younger cohort had married and had children at a younger age than the older group. The average time spent away from practice during the first 12 years after qualification was 2.7 years for the older women, 1.8 years for the younger women. After 12 years, 47% of the older women were working full-time (this group was less likely to be married) and 30% were working part-time. Over half of the younger group were working part-time (52%), and 39%

were working full-time. However, 23% of the older women were not practicing at all, versus nine percent of the younger group (and of these, 65% had been away for less than two years). The women in the later cohort were apparently better able to combine marriage, family and career than the women receiving their degrees during the early 1950's. They may be working part-time to accommodate their family, but they have not at least found it necessary to stop practicing altogether.

Gender role expectations may now have a smaller effect on women's choice of specialty. A 1977 study showed that women were twice as likely to choose pediatrics for a residency as they were to state they preferred it (Matteson & Smith). Younger women, however, may be more sure of their decision. Those who may have formerly gone into pediatrics because of perceived barriers to more male-dominated specialties are able to go into these specialties more freely than before. Weisman et al. (1980) computed the proportion of female to male residents in selected specialties and found that the specialties which women entered more frequently than men in 1970 (pediatrics and psychiatry) show substantial declines towards an equal proportion of men and women and the specialties chosen less frequently by women than men (general surgery, family medicine, and internal medicine) in 1970 show a gradual increase. Schemerhorn et al. (1986) found that younger female physicians were less likely to stress the importance of "compatibility with spouse's career preference" than older women when choosing a specialty, and are more willing to give more consideration to their own professional needs.

Comparative youth may affect type of practice. One quarter of the young women surveyed by Diamond (1984) were affiliated with HMO's. Some of these same women were also affiliated with free standing medical clinics. Diamond suggests that many of the younger women are salaried as they need to pay off college and medical school debts. Once these debts are paid off and children are older, private practice with its high startup costs and possibly more demanding schedule becomes a viable alternative. If so, a higher level of productivity would be expected from these women as they get older.

Age has a definite effect on productivity. Women age 40 or younger work 10.6% fewer hours per week than do men of the same age group, supporting the theory that women are busy bearing and rearing children at this time, a responsibility not equally shared by male physicians. In middle age, the differential lessens somewhat, with women working 6.6% fewer hours than men (AMA, 1984). However, female physicians age 56 and older work 12.1% fewer hours, contradicting Diamond's notion (1983) that a woman will be able to use her later years to devote to her practice (freed of many demanding family responsibilities) and supporting Heins, Smock, Martindale, Jacobs and Stein's (1977) finding that women tend to retire, or work fewer hours when their husbands retire. It is possible, then, that the effects of asymmetrical role permeability may continue well past childrearing years. However, another study examining the number of hours worked by female physicians of different age groups found no statistically significant differences (Cohen & Korper, 1976). There is also a relationship between age and the number of patients seen per hour.



Women of childbearing age see 20.1% fewer patients than men of the same age group, whereas older women see 17% fewer patients than similarly aged men (AMA, 1984). Again, the sex differential in patients seen per hour has yet to be examined in detail.

The effect of age on income is not linear either, as the income differential is less for older physicians, and greatest for middle-aged physicians. Women age 40 or younger, 40 to 55, and 56 or more earn 36%, 37% and 22.6% less per year, respectively, than do male physicians in the same age cohorts (AMA, 1984). Hourly earnings have also been examined by age groups, where we find that, "among physicians over the age of 55, female physicians on average earned more per hour than males in 1982" (AMA, 1984, p. 331). Close examination reveals that these women earned, on average, \$.20 more per hour than did the men, or .5% more. Women 40 years old or younger earned 14% less per hour than similar aged men. Middle-age women, 40 to 55, earned 28% less per hour than men.

Considering one specialty, pediatrics, the status differential represented by board certification rates is decreasing. Although overall 22% more male pediatricians are certified than female pediatricians, the gap appears to be decreasing among the younger pediatricians to approximately 15%. When considering U.S. medical school graduates alone, there has been a strong, steady increase in the proportion of certified female pediatricians. The certification rate difference between male and female pediatricians who graduated from U.S. medical schools between the years 1967 and 1976 is approximately five percent (American Academy of Pediatrics, 1981).

It would appear that asymmetrically permeable role boundaries have affected the careers of female physicians. Do female and male physicians pursue their careers and personal lives cognizant of such attitudes and societal constraints? Or, are they unaware of this cultural influence? The expectations of future physicians regarding their own ability and the ability of others to successfully combine family and career is discussed below.

### Role Permeability and the Expectations of Young Physicians

Although it appears that proportionately more female physicians are trying to remain involved in their careers and have a family life than before, they are not unaware of the difficulties such an undertaking entails. Bonar, Watson and Loester (1982) studied the expectations of future physicians regarding their plans to combine marriage and career. Medical students were asked about their ideal expectations and what they actually expect to occur on the subjects of marriage, children, income and so forth. Significantly more women than men experienced role strain (operationalized by a difference between "ideal" expectations and "real" expectations) regarding the possibility of marriage and occupation of spouse. In addition, nearly half the women indicated role strain in relation to income, location of practice, number of children, and the age they would like to be at the birth of their first child. Sex differences in real expectations in these areas were significant. Ideally, 44% of the women would interrupt their careers to rear children, 69% expect they actually will. Male medical students are not quite as family oriented; seven

percent would like to interrupt their careers for children, five percent expect to actually do so.

Fortunately, few of the men or women expected, ideally or actually, to interrupt their careers to accommodate their spouses' career, however, the role strain was still evident here. Ideally, five percent of the women would interrupt their progress to help their spouses' career; 10% of the men felt the same. Eighteen percent of the women believed they will actually have to, while again 10% of the men believed they will. Women expected to share equally with their spouses the tasks of childcare, housework, yardwork, home repair, and child expenses. The men did not expect to share equally on any of these tasks, but expected to share less on childcare and housework, and more on the remaining tasks (Bonar et al., 1982).

The medical students in a study by Ruhe and Salladay (1983) felt that gender was not relevant regarding friendship, but it was for some when considering a professional partnership. The predominant response for men and women was that gender was not relevant (71% and 85%, respectively). Five percent of the women and 3% of the men preferred a professional partnership with a woman. A professional partnership with a man, however, was preferred by 11% of the women and 26% of the men. That one-quarter of the male students stated a preference for a male professional partner may be related to their attitudes regarding motherhood and full-time medical practice. Significantly fewer men than women felt that a woman can adequately be both a full-time physician and a wife and mother (37% versus 60%). The possible economic disadvantages of a partnership with a woman practicing

part-time may be influencing these preferences. A majority of both sexes felt that a man could adequately fill the roles of full-time physician, husband and father, however proportionately more women than men were uncertain that this is possible (25% versus 17%), perhaps reflecting a greater awareness of the Herculean task of taking on a demanding profession and a family.

Grant, Ward, Brown and Moore (1987) found that expectations about family and career involvement differed little over the course of medical education. Medical students surveyed three times changed little in their plans to give equal balance to work and family. However, when asked about actual time commitment, students always anticipated committing more time to their careers than to their home life. This tendency increased over time. Time commitment to home life experienced a reciprocal reduction. However, men always planned on devoting more time to their careers than women, while women anticipated more time in family pursuits than did men.

Three quarters of the female students and faculty surveyed by Scadron, Witte, Axelrod, Greenberg, Arem, and Meitz (1982) disagreed that female physicians who spend long hours at work are neglecting their responsibilities to home and family. Half of the male faculty, and 56% of both the male medical students and administrators disagreed as well, which was a significant sex difference. In another study, residents and faculty were asked about the feasibility of combining family and career in their own lives (Shapiro, 1982). Male respondents had a significantly more negative attitude than did females towards balancing family and career. Proportionately more of

the men were married than the women, so it is likely that the men were speaking from experience. At any rate, women have become more confident than men about their own ability to combine medicine, marriage and family. Perhaps male students and faculty are unaware of the sacrifices women are apparently willing to make, and so underestimate women's degree of ability and commitment to medicine as a career.

Women may be held back by their own gender role socialization, unable to give up certain activities that would allow themselves to achieve professionally without sacrificing their personal life. Symonds, a psychiatrist counseling "superwomen" physicians describes a patient who was on the faculty of a medical school and,

complained bitterly that she shopped, prepared the meals, and did the laundry while her husband, a successful lawyer, did not help her with these chores. When I asked her why she did not get domestic help (which they could afford), she said it would be too extravagant. After all, it was only the two of them, and besides, her mother never had any help. The fact that her mother was an uneducated woman who was a full-time housewife did not seem to make any difference to this woman. (1983, p. 31)

Yogev (1981) suggests that being in charge of family work legitimizes the career achievement of women who were reared and socialized according to traditional gender role stereotypes. Young women and men today are currently undergoing a role expansion process that will possibly lead to more egalitarian relationships at home.

## Summary

When considering the concept of asymmetrically permeable role boundaries for the work and family roles of men and women, female physicians seem to be likely candidates for experiencing the intrusion of family responsibilities into their work role as detrimental to their career progress. The sex differences in the career and family life patterns of physicians are consistent with this view. In addition, young male and female physicians appear to anticipate that their future professional and personal lives will follow the "cultural mandate," although not without misgivings, and perhaps not to the degree physicians of the past have. Therefore, an investigation of the family and work roles of female and male physicians, where asymmetrically permeable role boundaries seem to thrive, should provide evidence for the effects of this permeability. This study examines one side of the permeable boundary, that which allows family responsibilities to intrude into the work role.

In a study of work and family roles of physicians, we can expect to find major sex differences. Women are likely to be more heavily involved in the family role, men more involved in their profession. However, there should be variation in the level of role immersion depending upon the age and sex of the physician, whether the physician has children. Young women of childbearing age may be more involved in the family role than older women, and yet may be equally involved in the work role, as younger women, through various coping strategies, outside help, and a less traditional spouse, may more efficiently delegate their various responsibilities. However, childless women of

any age may be more similar to each other in their level of involvement in both roles, and may also be more similar to men in their involvement, than to women with children.

Younger male physicians may also be more involved in the family role than older men, although, again, the presence of children may be the major determinant of role involvement differences among men. It is unclear whether the work role of younger physicians will be as heavy or lighter than that of older physicians. As heavy, due to the still present pressure to achieve while young, or lighter in recognition of a career-oriented wife? In addition, does the intrusion of the family role into the work role vary by sex and by age? Are younger men making more accommodations than older men, younger women less than older women? To summarize, this study tests the following hypotheses:

- 1a. Women and men's family roles are different from each other, in that women are more involved in the family role than men.
- 1b. There is an interaction between sex and age cohort that will affect the amount of involvement in the family role of men and women. Younger men and women can be expected to be less involved, whereas men of the older groups may be equivalent. Women of the middle age group can be expected to be the most heavily involved.
- 2a. Men will show greater work role involvement than women.
- 2b. There will be an interaction between sex and age cohort that will affect the amount of involvement in the work role of men and women. Men of the two younger cohorts can be expected to be similarly involved in work, while men in their mid-40's and older may be decreasing their efforts. A negative linear relationship is expected for women, i.e., decreasing work role involvement with increasing age.

- 3a. The family role makes more intrusions into women's work role than into men's work role.
- 3b. There is an interaction between sex and age cohort that will affect the amount of intrusions made by the family role into the work role of men and women. The greatest level of permeability for women is expected to be found in the youngest age cohort, when considerations about, if not actual, family role demands are expected to be at high levels. Permeability is hypothesized to greatest for men in the 36 to 45 year old age cohort, when both family and work role demands are expected to be at high levels.



## METHOD

### Subjects

The sample of pediatricians for this study was drawn from the AMA's Masterfile of Physicians. The sample of 3000 was randomly stratified by sex and board certification, i.e., one-quarter of the sample were non-board certified women, one-quarter were board certified women, and the other half was made up of similarly qualified men. Another specification for the sample was the exclusion of pediatric residents and retired pediatricians.

After one precontact letter and four mailings, 2,326 pediatricians had responded. Several of those responding proved to be fully retired (169). Some physicians were still in residency training, or had left pediatrics or medicine altogether (37). In addition, 10 of the potential respondents were deceased. These 216 physicians were considered to be out-of-scope. After adjusting for the number of out-of-scope respondents, the number of respondents to be included in the analysis was 2110, a response rate of 77.5%. The response rates for the four stratified groups were as follows: 71.1% for non-board certified women, 82.5% for board certified women, 71.2% for non-board certified men, and 85.3% for board certified men. Board certified pediatricians may have been more likely to respond because of a deeper commitment to the organization sponsoring the questionnaire, the American Academy of Pediatrics. In addition, the questionnaire may have been more interesting to those who are board

certified, while non-board certified pediatricians may have been more difficult to reach. Men and women were approximately equally likely to respond, at 78.3% and 76.8%, respectively.

### Materials

The questionnaire (see Appendix A) was developed to measure career barriers and facilitators, and therefore asks about board certification, marital status and family/home commitments, organization membership and involvement, importance of belonging to medical organizations, and professional activities (e.g., hours and weeks worked in 1984, income, career interruptions, and so forth). In addition, age, medical school, year of graduation, and major professional activity (such as research or administration) were variables that were supplied with the sample from the AMA.

### Procedure

Each of the 3000 pediatricians in the sample was sent a precontact letter from the American Academy of Pediatrics in September of 1985 one week before the questionnaire was to be mailed. The letter stressed the importance of the survey, and urged the cooperation of the pediatricians. One week later, each pediatrician was sent the questionnaire, a cover letter somewhat similar to the precontact letter, and an Academy addressed envelope in which to return the questionnaire.

Four weeks after the first mailing of the questionnaire, a second mailing was sent to pediatricians who had yet to respond. This mailing had an additional note, in bright orange paper, urging

pediatricians who were retired to please either return the questionnaire marked "Retired," or to contact the Academy regarding their retired status.

After another four weeks, a third mailing went out with a revised cover letter. The fourth and last mailing of the questionnaire was in January of 1986. All during the mailing period attempts were made to contact pediatricians who had moved since the AMA had last collected information from them.

The returned and completed questionnaires were coded by three coders. An interrater reliability check on 10% of the questionnaires selected at random resulted in kappa coefficients (Cohen, 1960) ranging from .935 to 1.00 for the closed-ended questions, and .660 to 1.00 for the open-ended questions.



## RESULTS

### Method of Analyses

This section first describes the general procedure used for testing Hypotheses 1a, 2a, and 3a, which concerned sex differences in family and work role involvement and work role permeability, followed by a discussion of the analyses for Hypotheses 1b, 2b, and 3b, which concerned the effects of age cohort and sex on role involvement and permeability. The procedure for testing each of the individual hypotheses then follows.

The first set of analyses reported here tested the hypotheses concerning sex differences in family role involvement, work role involvement, and work role permeability using chi-squares and t-tests with sex as the independent variable. The second set of analyses tested the effects of the interaction of sex and age cohort on family role involvement, work role involvement and work role permeability. The sample was divided into age cohorts as follows; those age 35 or younger, those 36 to 45, and those 46 or older. In addition to age cohort and sex, the presence or absence of children was also included as an independent variable. The dependent variables used in these analyses were aggregated so that multivariate analyses could be used to test the interactions.<sup>1</sup> This aggregation was accomplished by transforming individual variables relevant to family role involvement, work role involvement and work role permeability into z-scores,

and then summing these groupings of z-scores to develop the interval scales of Family Role Involvement, Work Role Involvement, and Work Role Permeability. Analysis of variance tested the impact of age, sex, and the presence or absence of children on the level of involvement in the two roles, and on work role permeability. If the interactions were significant, simple effects analyses were used to clarify the nature of the interactions.

### Respondents

As mentioned in the Method section, 2110 pediatricians returned useable questionnaires. Response rates from men and women were approximately equal (78.3% and 76.8%, respectively). The final sample included 1042 men and 1068 women. The average age of the men, 46, and women, 41.3, was significantly different,  $t(2108)=10.35$ ,  $p<.001$ . This age difference between the male and female pediatricians of this sample is not an anomaly, as it reflects the recent influx of women into all medical specialties. The distribution did, however, pose a problem in dividing the sample into cohorts. Because of the predominance of young female pediatricians, dividing the age distribution into cohorts with equal proportions of men and women was impossible. The cohorts chosen produced the least skewed proportions of men and women, although the cohorts still reflect significant differences in age,  $X^2(2, N=2110)=100.02$ ,  $p<.0001$  (Table 1).

Because of traditional expectations of maternal involvement in the family, the presence of children was hypothesized to exert a stronger influence on the female pediatricians' work and family role

Table 1

Percentage of Men and Women in the Three Age Cohorts

<u>Age Cohort</u>	<u>Men</u>	<u>Women</u>
< 35	21.0 (219) <sup>a</sup>	30.3 (324)
36 to 45	33.1 (345)	44.6 (476)
46 +	45.9 (478)	25.1 (268)
	<hr/> 100	<hr/> 100

<sup>a</sup>The number of respondents is given in parentheses.

involvement and work role permeability than on male pediatricians' involvement and permeability. Most of the pediatricians were parents (86.9% of the men, 74.9% of the women), but there was a greater percentage of women than men who were childless in the 36 to 45 year old age cohort,  $\chi^2(1, N=821)=4.52, p<.05$ , and in the 46 or older age cohort,  $\chi^2(1, N=746)=61.11, p<.0001$  (see Table 2).

The analyses and results for each of the hypotheses will now be discussed, each followed by a summary concerning the overall rejection or acceptance of the particular hypothesis.

#### Sex Differences in Family Role Involvement

Hypothesis 1a: Women and men's family roles are different from each other, in that women are more involved in the family role than men.

Variables that were used to operationalize aspects of the family role for this hypothesis were: marital status, responsibility for home chores, the number of children, and responsibility for childcare. These variables assessed whether the pediatrician was single, married, or once-married, and whether the pediatrician had responsibility for housework and childcare, or if these tasks were delegated to others. In addition to the number of children, approximate age of non-adult children was available (i.e., younger than age six, and ages six to 13). The literature on family work has suggested that heavier family role involvement is associated with the presence of young children at home for both men and women. Family role involvement then, could range from being single and childless, with no responsibility for

Table 2

Percentage of Men and Women in the Three Age Cohorts with Children

<u>Age Cohort</u>	<u>Men</u>	<u>Women</u>
< 35	65.8 (144) <sup>a</sup>	62.7 (203)
36 to 45	87.8 (303)	82.1 (391)
46 +	95.8 (458)	76.9 (206)
	<u>100</u>	<u>100</u>

<sup>a</sup>The number of respondents is given parentheses.



housework, to being married with children under age six and responsibility for both housework and childcare.

Sex differences in marital status and responsibility for home chores were examined with chi-squares. The possible categories of marital status were "married," "single," "divorced," or "widowed" (Table 3). Male pediatricians were more likely to be married than women,  $\chi^2(3, N=2102)=56.51, p<.0001$ ; however, this could be a result of their disproportionately older age, as older pediatricians were significantly more likely to be married than the younger cohorts,  $\chi^2(2, N=2102)=8.01, p<.05$ . Women were twice as likely to be divorced than the men, possibly a reflection of the greater strain felt by professional women universally in trying to maintain a demanding career, marriage, and possibly a family. Women were also twice as likely than men to be single, which may be an acknowledgement of the potential strain of combining marriage and career and/or a result of their younger age.

Although the respondents were provided with several possible alternatives that best represented their housework arrangements, for simplicity these categories were collapsed into "self," "spouse," "other family member," "paid help," and "other." The majority of women were in charge of housework in their households, while men were more likely to be able to delegate this responsibility to their spouses (Table 4). Women were much more likely than men to hire outside help to take on these chores (32.5% vs. 13.7%),  $\chi^2(4, n=2045)=1104.87, p<.0001$ .

Table 3

Percentage of Men and Women in Each Marital Status Category

<u>Marital Status</u>	<u>Men</u>	<u>Women</u>
Married	90.4 (938) <sup>a</sup>	78.7 (837)
Single	6.2 (64)	13.3 (141)
Divorced	3.1 (32)	6.3 (67)
Widowed	.4 (4)	1.8 (19)
	<u>100</u>	<u>100</u>

<sup>a</sup>The number of respondents is given in parentheses.

Table 4

Percentage of Home Chore Responsibility of Men and Women

<u>Responsibility</u>	<u>Men</u>	<u>Women</u>
Self	8.3 (85) <sup>a</sup>	55.1 (565)
Spouse	72.0 (734)	2.9 (30)
Other family member	.4 (4)	3.1 (32)
Paid help	13.7 (140)	32.5 (333)
Other	5.5 (56)	6.4 (66)
	<hr/> 100	<hr/> 100

<sup>a</sup>The number of respondents is given in parentheses.

A t-test was used to examine the sex differences in the number of children. Male pediatricians had significantly more children than did female pediatricians, on average having 2.5 children, compared to the 1.8 children of female pediatricians,  $t(2084)=11.08$ ,  $p<.001$ . The approximate age of children younger than age 14 was gauged by creating two new variables that counted whether respondents answered questions regarding childcare arrangements for children younger than age six, and/or children aged six to 13. These variables cannot tell us how many children are in these age groups, but they can tell us how many men and women have children of these ages. Chi-squares were used to ascertain whether men and women differed in their parental stage, first including all men and women, and second including only parents. Overall, women were more likely than the men to have children younger than age six,  $X^2(1, N=1978)=11.34$ ,  $p<.001$  (Table 5). Considering parents only, significantly more of the mothers had children younger than age six,  $X^2(1, N=1587)=39.97$ ,  $p<.0001$ , and children between the ages of six and 13,  $X^2(1, N=1629)=13.82$ ,  $p<.001$  (Table 6). The majority of fathers, conversely, had children over age 13. Therefore, although women had significantly fewer children than did the men, they were more likely to have children in age groups demanding more time and attention. This is, no doubt, partially a result of the younger age overall of female pediatricians, as pediatricians of the two younger cohorts were significantly more likely to have children younger than age 13 than did the older cohort,  $X^2(2, N=1705)=872.67$ ,  $p<.0001$ .

Table 5

Percentage of Men and Women in the Total Sample with Young Children

<u>Age of Children</u>	<u>Men</u>	<u>Women</u>
< 6	36.8 (357) <sup>a</sup>	44.3 (447)
6 to 13	36.7 (371)	38.9 (393)

<sup>a</sup>The number of respondents is given in parentheses.

Table 6

Percentage of Men and Women Parents with Young Children

<u>Age of Children</u>	<u>Men</u>	<u>Women</u>
< 6	42.7 (356) <sup>a</sup>	58.8 (443)
6 to 13	42.4 (371)	51.8 (391)

<sup>a</sup>The number of respondents is given in parentheses.

Finally, responsibility for childcare was assessed. Several childcare arrangement alternatives were provided (see Question 10, Appendix A), but these alternatives were collapsed into "self," "spouse," "other family member," "paid help," and "other." Chi-squares were used for childcare arrangements for children younger than age six, and for children between age six and 13 (Table 7). As with responsibility for household chores, there were significant differences in childcare responsibility between men and women, both for those with children younger than age six,  $\chi^2(4, N=804)=391.59, p<.0001$ , and for those with children aged six to 13,  $\chi^2(4, N=764)=453.73, p<.0001$ . Male pediatricians again were more able to rely on their spouses to provide childcare for their children. Women with very young children heavily relied on hired help, and were three times more likely to have utilized this resource than were men. A surprising number of women were responsible for the childcare of their school aged children (22.6%), implying that these women were managing their work schedules in such a way that allowed them to be home when their children returned from school in the afternoon. Fathers of school age children were also more likely than were fathers of very young children to provide childcare, although not to the degree that the women did.

Summary. These analyses present two different pictures of men and women's involvement in the family role. On the one hand, women were less likely than men to be married, and had, on average, fewer children than did the men. On the other hand, men, married or not, were much less likely to be in charge of housework. In addition, men

Table 7

Proportion of Childcare Responsibility of Men and Women Parents  
of Young Children

<u>Responsibility</u>	<u>Men</u>		<u>Women</u>	
	<u>&lt; 6</u>	<u>6 - 13</u>	<u>&lt; 6</u>	<u>6 - 13</u>
<u>Children's Age</u>				
Self	.6 (2) <sup>a</sup>	1.6 (6)	2.9 (13)	22.6 (89)
Spouse	69.2 (247)	78.7 (292)	3.6 (16)	4.8 (19)
Other family member	2.2 (8)	4.3 (16)	11.6 (52)	17.8 (70)
Paid help	24.6 (88)	9.2 (34)	76.1 (340)	48.1 (189)
Other	3.4 (12)	6.2 (23)	5.8 (26)	6.6 (26)
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>

<sup>a</sup>The number of respondents is given in parentheses.



were less likely than women to be in parental stages that involved large amounts of personal investment, although a surprising number of men and women parents did have young children. Finally, of parents of children younger than age 13, women were more likely to be responsible for childcare, especially in the case of school aged children. Men were much more likely to depend upon a spouse for their childcare arrangements, whereas women utilized paid child care workers more, for whom a certain amount of personal responsibility is required for hiring and management. Thus, overall it appears that indeed, female pediatricians were more personally involved in the family role than male pediatricians.

#### Sex by Age Differences in Family Role Involvement

Hypothesis 1b. There is an interaction between sex and age cohort that will affect the amount of involvement in the family role of men and women. Younger men and women can be expected to be less involved, whereas men of the two older groups may be equivalent. Women of the middle age group can be expected to be the most heavily involved.

Several transformations of the same dependent variables used to test Hypothesis 1a were necessary in order to use these variables to create an additive scale. Marital status was collapsed into "married" and "not married." Responsibility for housework and the two childcare responsibility measures were collapsed into "self" and "not self" (therefore, those who were childless, had children older than 13, or were not directly responsible for childcare fell into "not self").

The new variables that determined the presence of children six or younger, or six to 13, were already dichotomous. The interval level

variable counting the number of children was left untransformed.

These variables were then transformed into z-scores and were summed together to form a scale to assess family role involvement. The first scale, comprised of all seven of the variables, failed to achieve an acceptable level of internal consistency (Cronbach's alpha equal to .3978). Subsequent deletion of the housework variable and the two childcare responsibility variables increased internal consistency, raising Cronbach's alpha to .5666. The housework variable was negatively correlated with four of the six other variables being considered for this scale, and only 95 pediatricians were directly responsible for childcare. It appeared that these three variables were not appropriate for measuring family role involvement for this sample. The resulting scale, consisting of the marital status variable, the number of children, and the presence of young children did not appear to measure role involvement in the family, and thus was considered to be a scale measuring potential Family Demands.

Prior to analyzing Family Demands by sex and age cohort, the scale was assessed for homogeneity of variance. The three age cohorts were not equivalent in variation. Hypothesizing that one sex may have been responding to the scale differently from the other, homogeneity of variance was again tested, this time separately for each sex. Women in the three age cohorts responded in a homogeneous fashion, but men did not. Further analysis revealed that the responses of the men of the youngest age cohort had the greatest variance. Why younger men were more heterogeneous in their level of Family Demands than older men, or than similarly aged women is unclear. Perhaps, compared to

young female pediatricians who may enter parental status more gingerly, young male pediatricians, most not directly responsible for childcare, may start families more readily. In other words, young male pediatricians may be either single and childless, or married with a few children under the age of six, thus increasing the variation to the Family Demands scale.

Analysis of variance was then used to test Hypothesis 1b. All three of the independent variables—sex, age cohort and presence of children—had significant main effects (Table 8). Not unexpectedly, having children raises one's Family Demands,  $F(1,2068)=2688.76$ ,  $p<.001$ , as does being in the 36 to 45 year old age cohort,  $F(2,2068)=126.34$ ,  $p<.001$ . Men, however, had a higher Family Demands score than did women,  $F(1,2068)=12.32$ ,  $p<.001$ . Contrary to Hypothesis 1b, there was no significant age cohort by sex interaction (Figure 1). As expected, younger men and women were relatively uninvolved, but women of the oldest age cohort were the least involved of all six groups. Men in the 36 to 45 year old age cohort had the highest Family Demands score. Men of the oldest age group maintained scores above the mean. There was a significant interaction between presence of children and age cohort,  $F(2,2068)=14.12$ ,  $p<.001$ . Parents in the 36 to 45 year old cohort experience an increase in Family Demands, while their childless peers experience a decrease (Figure 2). Examining the whole picture with all three independent variables (Figure 3) points out the obvious and definite effect of the presence of children, and the less strong effect of age cohort, on Family Demands. Clearly, men with children are no different from women with

Mean Scores of Family Demands Broken Down by Sex,  
Presence of Children, and Age Cohort

	<u>&lt; 35</u>		<u>36 to 45</u>		<u>46 +</u>		<u>Total</u>
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	
<u>Presence of Children</u>							
No children	-3.86	-3.83	-4.25	-4.22	-3.88	-4.52	-4.06
Children	1.50	1.03	1.71	1.46	.26	-.15	.94

Note. Higher scores indicate higher mean Family Demands.

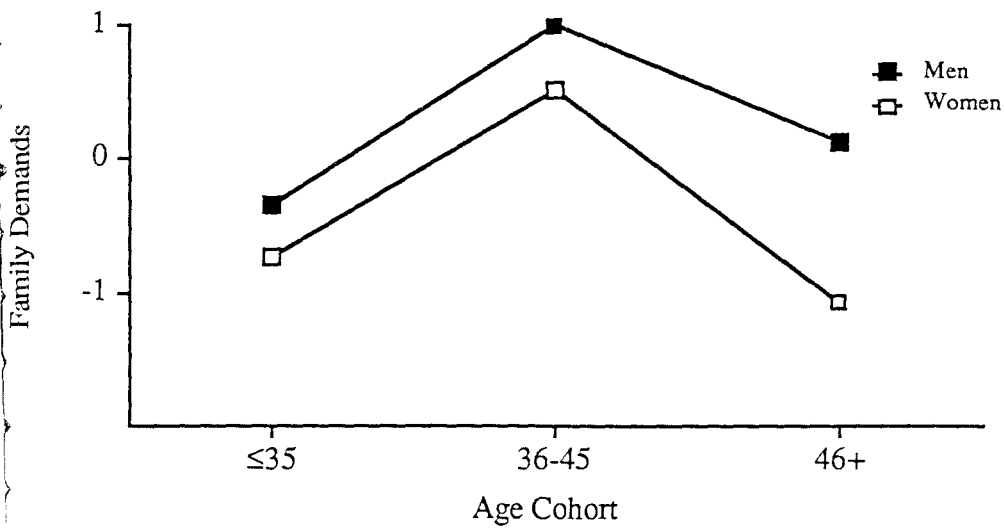


Figure 1: Family Demands scores, sex by age cohort.

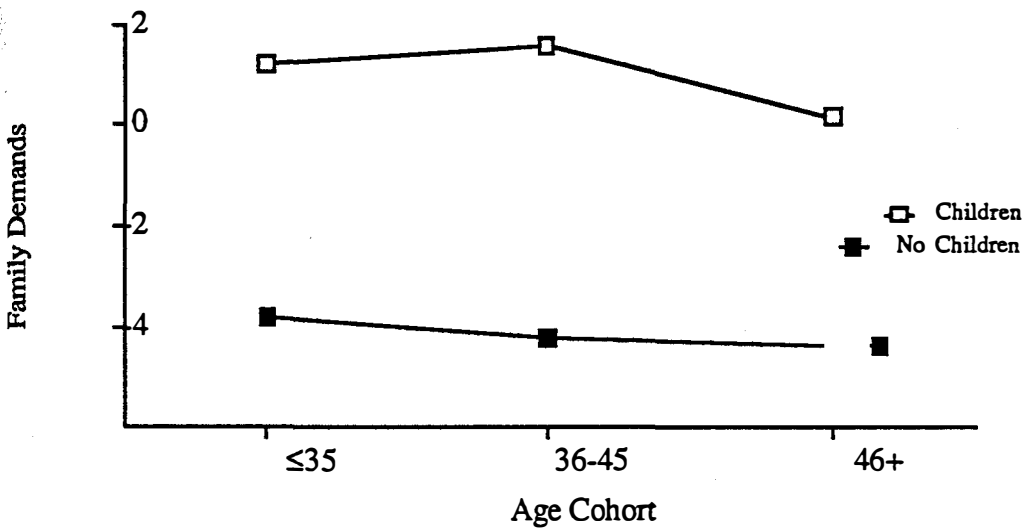


Figure 2: Family Demands scores, presence of children by age cohort.

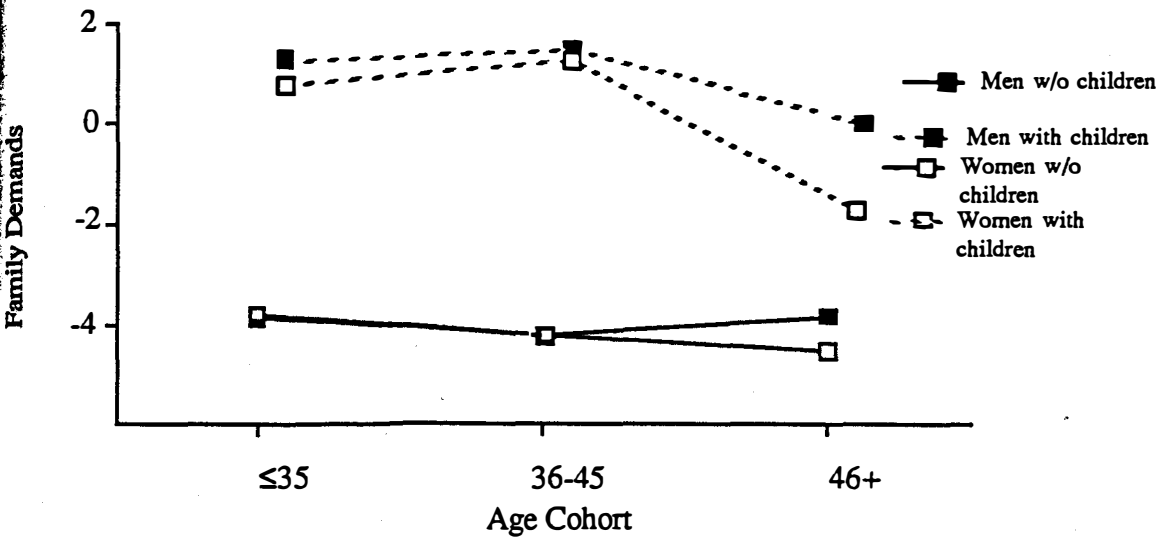


Figure 3: Family Demands scores, sex by presence of children by age cohort.

children when considering family obligations, at least as they are measured here. Increasing age for these parents brings about a lessening of family obligations.

Summary. Hypothesis 1b cannot be supported, based on the analysis of variance of the Family Demands scale. The majority of the items of the Family Demands scale related in some way to the presence of children, so it is not entirely surprising that the scale responded so strongly to the independent variable that also measured the presence of children. A more varied and encompassing scale measuring family role involvement may have produced different results.

#### Sex Differences in Work Role Involvement

Hypothesis 2a. Men will show greater work role involvement than women.

Dependent variables that were used to measure involvement in the work role included: number of hours worked in the most recent complete work week, number of weeks worked in 1984, number of patients seen in the most recent complete week of practice, board certification, membership in the AAP, membership in a chapter of the AAP, membership in another medical society, number of meetings attended of these three organizations in 1984, committee membership or holding an office in these organizations, future commitment to pediatrics, income, type of practice, present employment, and major professional activity. The information yielded from the analyses of these variables describe the pediatrician's involvement in career enhancing activities (certification, organizational involvement),



productivity, and relative status within medicine (type of practice, present employment, and major professional activity). A pediatrician fully involved in the work role could be one who is certified, active in professional organizational activities, works long hours, is not planning on leaving pediatrics, is an administrator in a teaching hospital and earns an income commensurate with such a practice. A less involved pediatrician could be a non-board certified, near-retirement practitioner, working part-time for a government clinic, without membership in a professional organization. Obviously, many permutations of involvement in the work role exist.

These variables can be grouped into three different aspects of the work role: productivity, prestige, and practice type. All three of the productivity variables—hours and weeks worked, and number of patients seen—were examined for sex differences (Table 9). Here it is obvious that male pediatricians worked a significantly longer week (51 vs. 42 hours), worked more weeks per year (48 vs. 46 weeks) and saw many more patients per week than did female pediatricians (112 vs. 77 patients).

The prestige variables, such as board certification, future commitment to pediatrics and income, were analyzed with chi-squares. Men and women were not different in board certification rates (54.0% of men, 62.6% of women), which is not true of the pediatrician population as a whole (Roback et al., 1986). This variable was used to stratify the sample and therefore overestimates the number of board certified women. Men were significantly more likely than women to have stated that they will be leaving the practice of pediatrics in

Table 9

Means and Standard Deviations of Hours Worked per Week,  
Weeks Worked per Year, and Number of Patient Visits per  
Week of Men and Women

	<u>Men</u>	<u>Women</u>
<u>Hours/Week</u>		
<u>M</u>	50.8	41.9 <sup>a</sup>
<u>SD</u>	14.0	15.6
<u>n</u>	1028	1048
<u>Weeks/Year</u>		
<u>M</u>	47.9	45.6 <sup>b</sup>
<u>SD</u>	44.4	8.8
<u>n</u>	1035	1035
<u>Visits/Week</u>		
<u>M</u>	112.3	76.8 <sup>c</sup>
<u>SD</u>	65.5	51.6
<u>n</u>	914	889

<sup>a</sup> $t(2074)=13.61, p<.001$   
<sup>b</sup> $t(2066)=7.65, p<.001$   
<sup>c</sup> $t(1801)=12.75, p<.001$

the near future (18.7% vs. 10.5%),  $\chi^2(1, N=2022)=26.16, p<.0001$ . This could be an artifact of the age difference, i.e., there were more male pediatricians near retirement age than female pediatricians, and older pediatricians were significantly more likely to be planning on leaving pediatrics,  $\chi^2(2, N=2022)=151.51, p<.0001$ .

Female pediatricians were overrepresented in the lower categories of income and vastly underrepresented in the higher categories,  $\chi^2(5, N=2070)=263.06, p<.0001$  (Table 10). Women were twice as likely as men to be earning less than \$60,000 annually, and one-third as likely to be earning over \$100,000. This is not entirely surprising considering the fewer hours worked and patients seen by the women. The lower income may also be a reflection of the age difference, in that many of these women may still have been in the lower echelons of medicine simply due to their relative inexperience, and, not unexpectedly, younger pediatricians earned less income than did older pediatricians,  $\chi^2(2, N=2070)=177.80, p<.001$ .

The prestige variables of membership in professional organizations were combined to form an interval level variable by summing the number of organizations (American Academy of Pediatrics, a chapter of the American Academy of Pediatrics, and other medical societies) any one respondent belongs to, with a minimum of zero and a maximum of three. The same process was used with committee membership in these organizations, again with a minimum of zero and a maximum of three. The number of meetings attended of these three organizations were summed to give an overall meeting attendance score. All three of these variables were analyzed for sex differences using t-tests.

Table 10

Percentage of Men and Women in Each Level of Income

<u>Income</u>	<u>Men</u>	<u>Women</u>
< 40	12.1 (124) <sup>a</sup>	31.7 (331)
40 to 60	20.7 (212)	33.7 (352)
60 to 80	25.7 (264)	19.3 (202)
80 to 100	17.3 (177)	7.2 (75)
100 to 120	12.3 (126)	5.1 (53)
> 120	12.0 (123)	3.0 (31)
	<u>100</u>	<u>100</u>

Note. Income is presented in thousands of dollars.

<sup>a</sup>The number of respondents is given in parentheses.

Seventeen percent of the respondents did not answer the series of organizational membership questions. The assumption was made that if a respondent had belonged to an organization or belonged to a committee, he or she would have stated as much, and therefore a non-response was interpreted as meaning the respondent did not belong to an organization or a committee. Similarly, not stating how many meetings of these organizations were attended was interpreted as meaning that no meetings were attended. Table 11 shows the means and standard deviations for these three variables, as well as the results of the  $t$ -tests. The differences were not large, yet men were significantly more involved in these organizations than were women; they belonged to more, were members of more committees within the organizations, and attended more meetings.

The practice type variables, which included major professional activity, type of practice and present employment, were analyzed using chi-squares. The latter two were regrouped as both variables have numerous response categories. Seven categories of the type of practice variable were grouped into an "other" category (6.4% of the total sample fell into this category), leaving "direct patient care," "administration," "medical teaching," and "medical research." Present employment was grouped into eight categories: "solo practice," "partnership/arrangement," "group practice," "medical school," "non-governmental hospital," "government agency," "no classification," and "other."

Table 11

Means and Standard Deviations of Numbers of Professional Organization Memberships, Committee Memberships, and Meetings Attended

	<u>Men</u>	<u>Women</u>
<u>Organization membership</u>		
<u>M</u>	1.96	1.66 <sup>a</sup>
<u>SD</u>	1.01	1.05
<u>n</u>	1042	1068
<u>Committee membership</u>		
<u>M</u>	.45	.26 <sup>b</sup>
<u>SD</u>	.69	.53
<u>n</u>	1042	1068
<u>Meetings attended</u>		
<u>M</u>	4.31	3.34 <sup>c</sup>
<u>SD</u>	5.78	5.76
<u>n</u>	1042	1068

<sup>a</sup> $t(2108)=6.73, p<.001$   
<sup>b</sup> $t(2108)=6.87, p<.001$   
<sup>c</sup> $t(2108)=3.84, p<.001$

The pattern of sex differences within these three variables is similar. Table 12 presents the proportions of men and women in the eight different categories of major professional activity used by the AMA. Men were much more likely to state their major professional activity as being office-based than women were,  $\chi^2(7, N=2110)=66.59$ ,  $p<.0001$ . Women, on the other hand, were more likely than men to be full-time hospital staff members, teaching or conducting research, or inactive. The significant differences in type of practice (Table 13) show almost identical results,  $\chi^2(4, N=2110)=38.88$ ,  $p<.0001$ .

The employment situations of these men and women follow the same theme (Table 14). Men were much more likely to be in a office practice situation (solo, partnership or arrangement, and group) than were women. Women, conversely, were much more likely to find themselves working as hospital staff, working for a local, state or federal agency, or in a situation that defies classification,  $\chi^2(7, N=2110)=135.70$ ,  $p<.0001$ . Relative experience does not explain these practice differences, for female pediatricians are significantly less likely than male pediatricians to be in an office practice situation in all three age groups. The differences in practice arrangements and location do, however, partially explain the sex differences in the productivity variables. Working hours are more likely to be limited in the settings where women are overrepresented, such as on a hospital staff or with government agencies.

Summary. These results suggest that men were more involved in the work role than were women. Men worked more hours per week and weeks per year, and saw more patients than women did. Not

Table 12

percentage of Men and Women in Each Major Professional Activity

<u>Activity</u>	<u>Men</u>	<u>Women</u>
Office based	80.3 (837) <sup>a</sup>	67.3 (719)
Fulltime hospital staff	8.2 (85)	14.6 (156)
Administration	3.3 (34)	2.1 (22)
Medical teaching	1.3 (14)	3.1 (33)
Medical research	3.6 (37)	5.1 (54)
Inactive	1.5 (16)	4.6 (49)
Not classified	1.6 (17)	2.3 (25)
Other	.2 (2)	.9 (10)
	<u>100</u>	<u>100</u>

<sup>a</sup>The number of respondents is given in parentheses.



Table 13

Percentage of Men and Women by Type of Practice

<u>Type of Practice</u>	<u>Men</u>	<u>Women</u>
Direct patient care	88.1 (918) <sup>a</sup>	80.8 (863)
Administration	3.3 (34)	2.1 (22)
Medical teaching	1.3 (14)	3.1 (33)
Medical research	3.6 (37)	5.1 (54)
Other	3.7 (39)	9.0 (96)
	<u>100</u>	<u>100</u>

<sup>a</sup>The number of respondents is given in parentheses.

Table 14

percentage of Men and Women by Employment Arrangement

	<u>Men</u>	<u>Women</u>
<u>Employment Arrangement</u>		
Solo	27.6 (288) <sup>a</sup>	19.7 (210)
Partnership/arrangement	18.1 (189)	8.5 (91)
Group practice	22.2 (231)	16.5 (176)
Medical school	7.1 (74)	9.6 (103)
Non-gov't hospital	7.6 (79)	13.2 (141)
Gov't agency	6.6 (69)	12.8 (137)
No classification	9.5 (99)	14.7 (157)
Other	1.2 (13)	5.0 (53)
	<u>100</u>	<u>100</u>

<sup>a</sup>The number of respondents is given in parentheses.

surprisingly, their incomes were higher. Men were more involved in professional organizations, demonstrating a greater desire or opportunity to spend time in career enhancing activities. Finally, men were more likely to be found in more prestigious practice arrangements than women, concentrating on direct patient care in more "typical" private practice arrangements, whereas women were more likely to find themselves affiliated with teaching and non-government hospitals, or working for a government agency. These practice differences may be partially explained by the age difference, as opportunities for entry into private practice have decreased in recent years, forcing young pediatricians of both sexes to practice medicine for an employer. Even so, more male pediatricians than female pediatricians, in even the youngest age cohort, were in solo, partnership or group practices. Women may be more attracted to employment in areas where there is greater control over the hours worked, such as with a hospital. Women were more likely to express a commitment to pediatrics for the near future, which suggests a greater involvement in the work role. This greater commitment may also be the result of the age difference, since there were fewer women than men nearing retirement age.

### Sex by Age Differences in Work Role Involvement

Hypothesis 2b. There is an interaction between sex and age cohort that will affect the amount of involvement in the work role of men and women. Men of the two younger cohorts can be expected to be similarly involved in work, while men in their mid-40's and older may be decreasing their efforts. A negative linear relationship is expected for women, i.e., decreasing work role involvement with increasing age.

A scale assessing Work Role Involvement was developed in the same manner as the scale for Family Demands. The productivity variables—hours and weeks worked, and the number of patients seen—were left as interval level variables, as was the technically ordinal variable of income. Membership in professional organizations and committee membership, originally dichotomous variables, were used as interval level variables, transformed as discussed in the above section for Hypothesis 2a. Numbers of various meetings attended were summed into a variable assessing the total number of professional organization meetings attended. The board certification and future commitment to pediatrics variables, both dichotomous, were left unmodified.

Although the practice type variables can demonstrate sex differences in prestige of practice type, and therefore a level of commitment, these variables do not lend themselves easily as measures of work role involvement, and therefore were not be included in the analysis of Hypothesis 2b.

These nine variables were then transformed into z-scores and summed, creating the scale Work Role Involvement. With the deletion of the variable assessing future commitment to pediatrics, the

resulting scale attained an acceptable Cronbach's alpha equal to .6256. Homogeneity of variance was then tested. As with the Family Demands scale, the three age cohorts were not equivalent in variation, the oldest group exhibiting the most variation. Separating the age cohorts by sex, homogeneity of variance was again tested. Both men and women in the oldest age groups had the greatest variation in their responses to Work Role Involvement, the women particularly so. Suspecting that this source of variation may have been due to the effect of impending retirement among the older pediatricians of this age cohort, the age cohort was split into two more age groups, those aged 46 to 55, and those older than 55. Again homogeneity of variance was assessed by age cohort and sex. Men of the these two older groups did not differ in variation; however, the difference in variance for the women approached significance. Interestingly enough, the women older than age 55 had a higher mean Work Role Involvement score than did the women age 46 to 55, a difference that was marginally significant (the men had mean scores in the opposite direction). It is possible that the older women were less encumbered by family responsibilities than the women age 46 to 55, as there was a trend that indicated that they were less likely to be married than the younger women (65% vs. 75%). At any rate, this difference within the age cohort of 46 and older women may account for the heterogeneity of variance among the three age cohorts overall.

Analysis of variance was then used to test Hypothesis 2b.

Unlike the testing of Hypothesis 1b, the presence of children did not have a significant main effect, although there was a main effect of

sex,  $F(1,1779)=231.94$ ,  $p<.001$ , and of age cohort,  $F(2,1779)=38.52$ ,  $p<.001$  (Table 15). Once again, the expected interaction between sex and age cohort did not prove to be significant (see Figure 4). There was a significant interaction between the presence of children and sex variables which appears to indicate that the presence of children affects men and women's work role involvement in opposite directions,  $F(1,1779)=54.34$ ,  $p<.001$  (Figure 5). Cell wise comparisons of Work Role Involvement of men and women with children, and of women with children and women without children are presented in Table 16. Work Role Involvement of fathers is significantly higher than that of mothers. The level of Work Role Involvement of childless women, although below average, is still higher than the involvement of mothers. Figure 6 presents the full analysis, with all three independent variables. The presence of children exacts very different effects on the work role involvement of men and women. Male pediatricians appear to be operating as traditional breadwinners, working harder than all the other groups. Female pediatricians with children, conversely, are left far behind, approaching non-parent pediatricians in level of Work Role Involvement only in the oldest age cohort. Male and female pediatricians who are childless are virtually indistinguishable.

Summary. Although the expected interaction between sex and age cohort was not present, the interaction between sex and the presence of children bears some comment, especially in light of the results of the testing of Hypothesis 1b in which men and women with children were found not to be different in their level of Family Demands. The fact

Table 15

Mean Scores of Work Role Involvement Broken Down by Sex,  
presence of Children, and Age Cohort

	<u>&lt; 35</u>		<u>36 to 45</u>		<u>46 +</u>		
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Total</u>
<u>Presence of</u> <u>Children</u>							
No children	-1.21	-1.26	-.35	.27	-.06	-.08	-.60
Children	.41	-3.11	2.05	-1.49	2.28	-.85	.23

Note. Higher scores indicate higher mean Work Role Involvement.



Figure 4: Work Role Involvement scores, sex by age cohort.



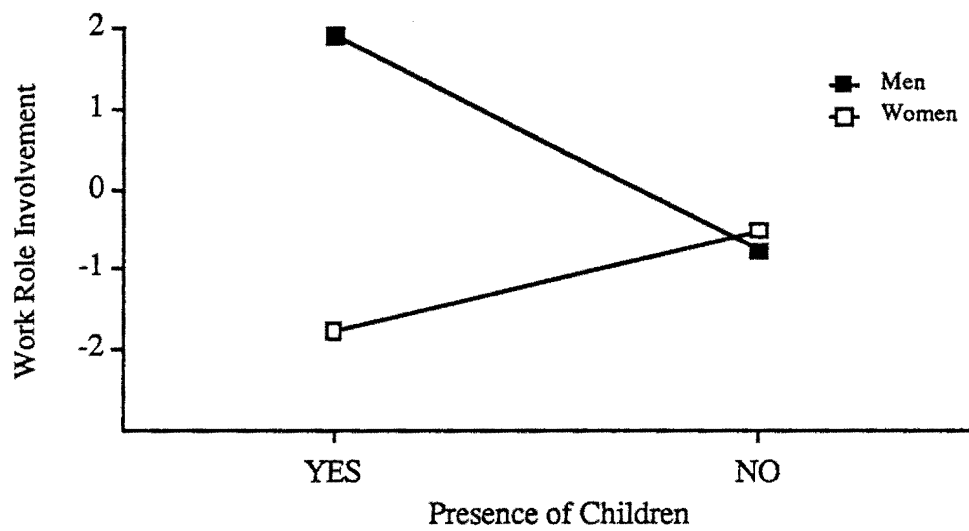


Figure 5: Work Role Involvement scores, sex by presence of children.

Table 16

Means and Standard Deviations of Work Role Involvement of Men and Women with Children, and Women with Children and Childless Women

	<u>Work Role Involvement</u>	
	<u>M</u>	<u>SD</u>
Men with children (n=795)	1.90 <sup>a</sup>	3.61
Women with children (n=669)	-1.75	4.06
Women without children (n=213)	-.52 <sup>b</sup>	3.62
Women with children (n=669)	-1.75	4.06

Note. Higher scores indicate more work role involvement.

<sup>a</sup> $t(1462)=18.16, p<.001$

<sup>b</sup> $t(880)=3.94, p<.001$

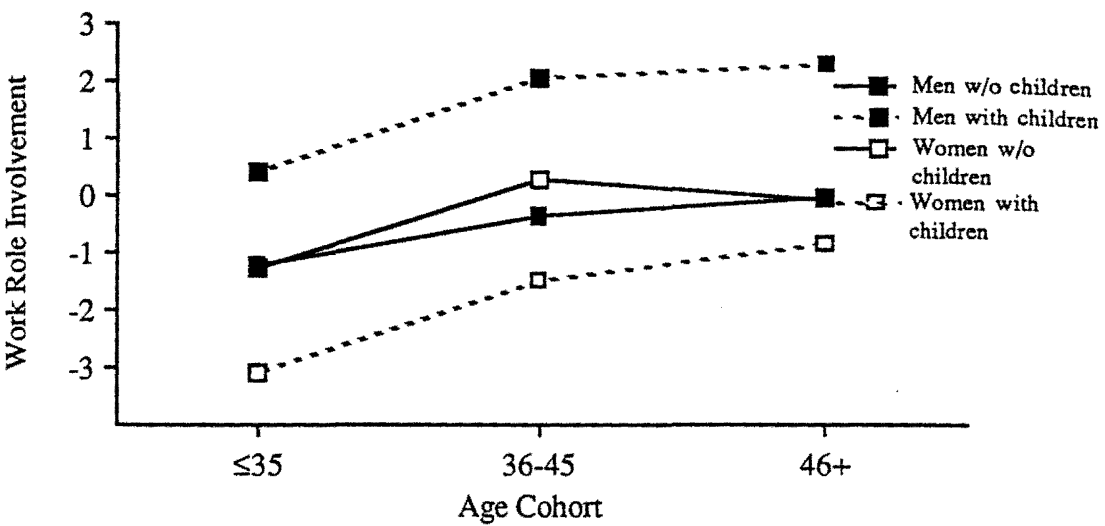


Figure 6: Work Role Involvement scores, sex by presence of children by age cohort.

that here these two groups are extremely dissimilar in their level of Work Role Involvement suggests that the Family Demands scale was deficient in measuring potential time and effort consuming activities that can be involved with family life, and that may be taken on more by one sex than the other. At any rate, these analyses indicate that the productivity difference between men and women, and other differences associated with work life for physicians, are not solely the result of sex differences. Traditional gender roles taken on with the assumption of parental status appear to have a stronger effect than sex alone. Furthermore, greater Work Role Involvement becomes more possible with increasing age for both sexes.

#### Sex Differences in Work Role Permeability

Hypothesis 3a. The family role will have made more intrusions into women's work role than into men's work role.

This hypothesis examines the asymmetrical role permeability issue. The expectation here is that women will experience more family intrusions into the work role than will men. Questions that were used to study this issue assessed whether family considerations affected career choices (and if so, how), whether home responsibilities restricted involvement in the AAP for those who were members, whether home responsibilities affected the decision to join the AAP for those who were not members, whether family obligations were a problem early in the practice or career, and whether there was a career interruption due to a spouse's career or childrearing.

Family considerations affecting career choice was a dichotomous variable and was analyzed using a chi-square. The variable assessing how family considerations have affected career choice was divided into categories such as income level, type of practice, number of hours worked and specialty choice. Chi-squares were also used for this variable. Family obligations being a problem in early career, and the career interruption variable were both dichotomous, and so were also analyzed with chi-squares. The two home responsibilities restricting involvement in the AAP were both measured using a Likert-type scale, and so were analyzed via t-tests.

Women were significantly more likely than men to state that family considerations had affected their career choices (53.4% vs. 27.8%),  $\chi^2(1, N=2070)=139.12, p<.0001$ . There were significant differences between the men and women in just how their career choices were affected,  $\chi^2(7, N=941)=118.93, p<.001$  (Table 17). Men were significantly more likely than the women to state that their choices concerning level of income,  $\chi^2(1, N=941)=171.67, p.001$ , and practice location,  $\chi^2(1, N=941)=25.57, p<.001$ , were affected by family considerations. Women, on the other hand, were more likely to state that their level of productivity in terms of hours worked weekly was affected,  $\chi^2(1, N=941)=66.16, p.001$ . In addition, women were more likely than men to perceive their career choices as having been influenced by a conflict between career and family,  $\chi^2(1, N=941)=47.58, p<.001$ . Men and women were similarly affected in their choices of subspecialty and type of practice.

Table 17

percentage of Men and Women by Specific Career Effect  
of Family Considerations

<u>Career Effect</u>	<u>Men</u> (n=318)	<u>Women</u> (n=623)
Location	30.8 (98) <sup>a</sup>	16.5 (103)
Amount of hours	5.4 (17)	28.2 (176)
Type of practice	15.7 (50)	17.2 (107)
Family/career conflict	8.8 (28)	14.4 (90)
Income	9.4 (30)	1.6 (10)
Subspecialty	7.9 (25)	8.4 (52)
Specialty	8.5 (27)	5.3 (33)
Other	13.5 (43)	8.4 (52)
	<hr/> 100	<hr/> 100

<sup>a</sup>The number of respondents is given in parentheses.

Out of a list of possible barriers and problems concerning early career development, women were three times more likely than men to state that family obligations had created early career problems (39.5% vs. 11.9%),  $\chi^2(1, N=2058)=202.15, p<.0001$ . Women were also nearly five times more likely than men to have had a career interruption (35.9% vs. 7.5%),  $\chi^2(1, N=2086)=244.80, p<.0001$ . Of the men and women who had career interruptions, women were overwhelmingly more likely to have had them because of their spouses' career (20.1% vs. 1.3%),  $\chi^2(1, N=456)=14.73, p<.001$ , or because of childrearing responsibilities (69.1% vs. 0%),  $\chi^2(1, N=456)=122.30, p<.0001$ . Finally, women rated being too busy at home as a more important factor than did men for limiting involvement in the AAP, for both members and non-members (Table 18).

Summary. As measured by these variables, it appears that female pediatricians have felt more intrusions into their work role for family reasons than have men. Women were more likely than men to have stated that their career choices had been affected by family considerations, that family obligations had created early career problems, that they had career interruptions because of family reasons, and that home responsibilities were important reasons for limiting involvement in the AAP. Overall, these women appeared to have experienced more work role permeability than the men have.

Table 18

Means and Standard Deviations of "Busy Home Life" as a Restricting Factor for AAP Involvement

	<u>Men</u>	<u>Women</u>
<u>Members</u>		
<u>M</u>	3.72	4.11 <sup>a</sup>
<u>SD</u>	1.07	.94
<u>n</u>	652	630
<u>Non-members</u>		
<u>M</u>	2.97	3.54 <sup>b</sup>
<u>SD</u>	1.23	1.19
<u>n</u>	273	317

Note. Scale ranged from 1 "not at all important" to 5 "very important".

<sup>a</sup>t(1280)=-6.98, p<.001

<sup>b</sup>t(588)=-5.71, p<.001



Sex by Age Differences in Work Role Permeability

Hypothesis 3b. There is an interaction between sex and age cohort that will affect the amount of intrusions made by the family role into the work role of men and women. The greatest level of permeability for women is expected to be found in the youngest age cohort, when considerations about, if not actual, family role demands are expected to be at high levels. Permeability is hypothesized to be greatest for men in the 36 to 45 year old age cohort, when both family and work role demands are expected to be at high levels.

A scale measuring Work Role Permeability was developed in the same manner as was Family Demands and Work Role Involvement. Family considerations affecting career choice, family obligations a problem in early career, and the career interruption variables, all dichotomous, were left unmodified for this analysis. How family considerations affected career choice was not used in this analysis, as it was a multiple category variable and thus could not be scaled.

The variables measuring how important obligations at home as a determinant for limiting involvement in the AAP were also not included in the development of this scale, since once assessed for internal consistency, the Work Role Permeability scale's alpha increased with the removal of these variables. The resulting Cronbach's alpha was .5522. The Work Role Permeability scale then consisted of the variables assessing career interruptions, whether family considerations affected career choices, and whether family obligations created problems early in the pediatrician's career.

As with the two previous scales, the Work Role Permeability scale was assessed for homogeneity of variance among the three age cohorts. Unlike the other two scales, responses to Work Role Permeability were not heterogeneous.

Analysis of variance was then used to test Hypothesis 3b. Unlike the analyses for Hypothesis 1b and 2b, men did not vary in their level of Work Role Permeability depending upon whether they had children or not. Wishing to avoid the small and rather unequal cell made up of men in the age cohort of 46 and older without children ( $n=19$ ), the presence of children variable was used only to distinguish between women, but not for men. This resulted in a 3 X 3 analysis of variance, comparing all men, women with children, and women without children in the three age cohorts on Work Role Permeability. The results of this analysis of variance were not different than the original 2 X 2 X 3 analysis of variance; therefore, the discussion will focus on the three-way analysis.

The mean scores of Work Role Permeability are presented in Table 19. There were significant main effects for (a) sex,  $F(1,1990)=534.23$ ,  $p<.001$ , (b) presence of children,  $F(1,1990)=226.36$ ,  $p<.001$ , and (c) age cohort,  $F(2,1990)=11.84$ ,  $p<.001$ . The hypothesized interaction between sex and age cohort was again was not present (Figure 7). There was an interaction between sex and the presence of children, which, as can be seen in Figure 8, demonstrates that women with children experienced more work role permeability than women without children, or men in general,  $F(1,1990)=68.01$ ,  $p<.001$ . Figure 9 presents all three independent variables, and again makes obvious

Table 19

Mean Scores of Work Role Permeability Broken Down by Sex,  
presence of Children, and Age Cohort

	<u>&lt; 35</u>		<u>36 to 45</u>		<u>46 +</u>		
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	<u>Total</u>
<u>Presence of</u> <u>Children</u>							
No children	-1.00	-.57	-1.33	-.84	-1.08	-1.07	-.90
Children	-.46	1.65	-.98	1.43	-.96	1.45	.21

Note. Higher scores indicate higher mean Work Role Permeability.

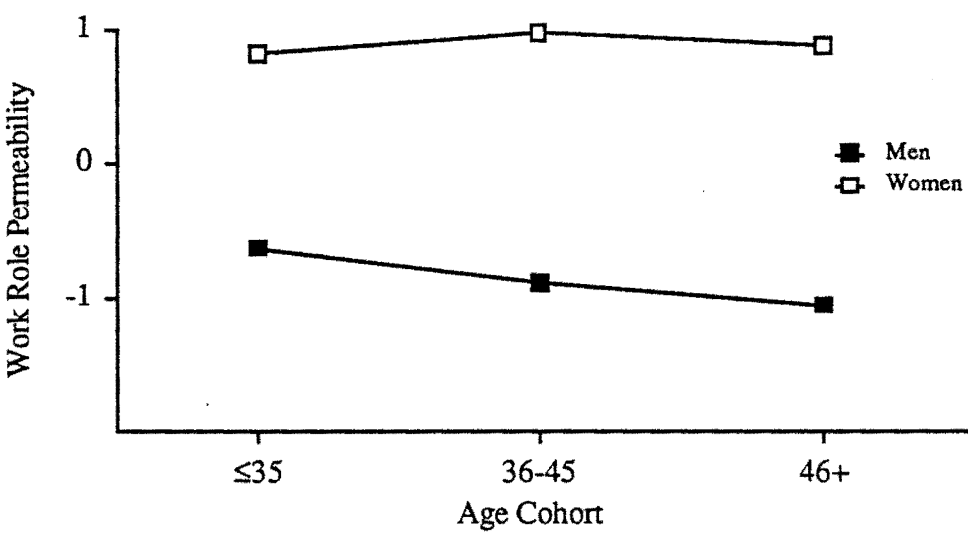


Figure 7: Work Role Permeability scores, sex by age cohort.

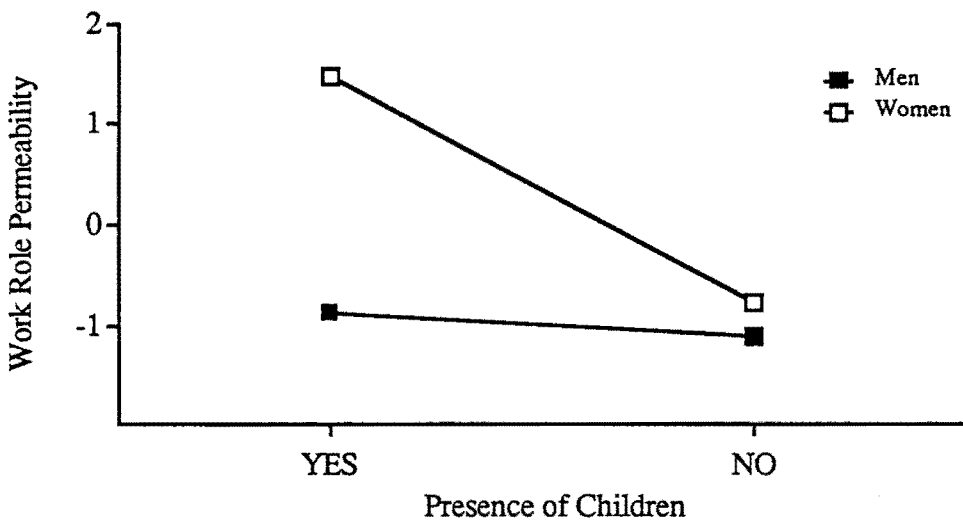


Figure 8: Work Role Permeability scores, sex by presence of children.

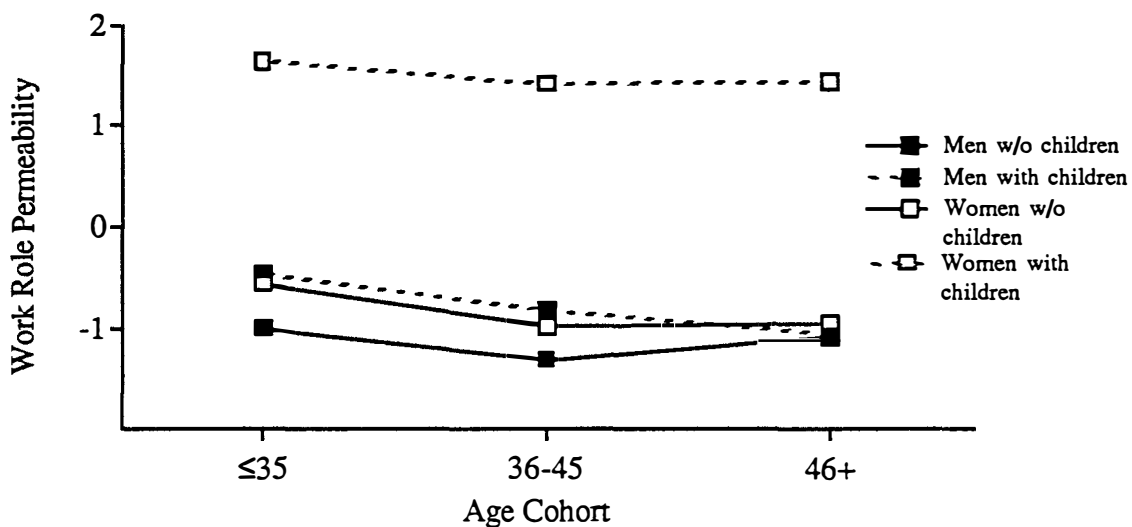


Figure 9: Work Role Permeability scores, sex by presence of children by age cohort.

the difference between women with children and all other groups. Cell wise comparisons of Work Role Permeability of pediatricians with children, and of women with children and women without children reveal that women with children do indeed experience significantly more work role permeability than both men with children,  $t(1622)=-25.04$ ,  $p<.001$ , and women without children,  $t(1006)=-14.70$ ,  $p<.001$  (Table 20). Essentially, men with children were not different than pediatricians of either sex who did not have children. Work role permeability appears to be fairly constant across the age groups, and only differentiates women with children from all other groups.

Summary. Hypothesis 3b cannot be supported based on this analysis of variance. Age does not interact with sex to affect work role permeability. Women with children, the group with the lowest work role involvement, had the highest amount of experienced work role permeability. Clearly, the two are related for women.

### Conclusion

The first half of each of the three hypotheses, in which sex differences were hypothesized for Family Demands, Work Role Involvement, and Work Role Permeability, received support. Female pediatricians of this sample, although less likely to be married and with fewer children, were more likely to be responsible for housework and childcare than were men, and were more likely to be in families that typically demand greater involvement, i.e., families with young children. Conversely, women were less involved in the work role than were men. Male pediatricians were more productive in their practices,

Table 20

Means and Standard Deviations of Work Role Permeability of Men and Women with Children, and Women with Children and Childless Women

	<u>Work Role Permeability</u>	
	<u>M</u>	<u>SD</u>
Men with children (n=870)	-.89 <sup>a</sup>	1.50
Women with children (n=754)	1.49	2.30
Women without children (n=254)	-.79 <sup>b</sup>	1.55
Women with children (n=754)	1.49	2.30

Note. Higher scores indicate higher mean Work Role Permeability.

<sup>a</sup>t(1622)=-25.04, p<.001

<sup>b</sup>t(1006)=-14.70, p<.001



more involved in professional organizations and had attained more prestigious positions and higher incomes than had the women. Given that women were more involved than men in the family, and less involved in their work role, it is not surprising that they also experienced more work role permeability.

The second half of each of the hypotheses stated that there would be a sex by age cohort interaction for Family Demands, Work Role Involvement, and Work Role Permeability. These expected interactions did not emerge. The presence of children proved to be the major determinant effecting the level of involvement in the family and work, and of work role permeability. Men and women with children proved to be no different from each other on Family Demands, and were readily distinguishable from pediatricians without children. Family Demands for these parents decreased with their increasing age. There was a large difference in Work Role Involvement between these same two groups. Men with children clearly were the most involved in the work role, while women with children were well below the average in their work role involvement. As with Family Demands, men and women pediatricians without children were very similar. Work Role Permeability was also affected by the presence of children, but only for the women. Pediatricians without children, and male pediatricians with children were roughly the same in their degree of experienced permeability. Permeability for all groups was fairly constant across the ages.

<sup>1</sup> Initially, factor analyses were used to develop the three scales. Two factors emerge that were potentially useful; however, a factor that could have been used for assessing work role permeability was not evident.

## DISCUSSION

The discussion briefly summarizes the results of this dissertation and indicates potential implications of these findings for men and women physicians in particular, and professional men and women in general. The limitations of the present study are then discussed, followed by suggestions for future research in this area.

### Summary

Sex differences in family and work role involvement, and in work role permeability. The three hypotheses in which sex differences were hypothesized for family and work role involvement, and work role permeability were supported. In terms of family role involvement, female pediatricians were less likely to be married than were the male pediatricians. This difference may be because of their younger age, but it may also be a reflection of the experienced or anticipated strain that is often associated with marriage, career and family for women. Women were more likely than men to be responsible for the housework in their home. Other research on female physicians has found a high degree of personal responsibility for housework (Pyke & Kahill, 1983); however, unlike Heins' research (1979), this study found female physicians much more likely than the men to employ household help. Similar to other professionals (Yogev, 1981), female pediatricians were more likely to be responsible for childcare as well. Male pediatricians had significantly more children than did the

women. This difference, again, could be because of the women's younger age, but also could be a result of the national trend in delayed childbearing, or of a conscious choice by these women to limit family size as an attempt to minimize family-career conflict.

Although having fewer children overall, women were significantly more likely to be in families with children younger than age 14. Families with young children typically call for more time and effort invested in the family role; therefore these younger families can be expected to increase the family role involvement of these women.

Although it appeared that women had a more involved family role, male pediatricians had more work role involvement. As several other studies have found (Bobula, 1980; Roback, et al. 1986; Wilson, 1981), there were significant differences between men and women in terms of type of practice arrangement and major professional activity. As in these other studies, female pediatricians were less likely to be in an office-based practice, and were more likely to be members of a hospital staff, employed by a government agency, teaching or conducting research, or inactive. These differences held up across the age cohorts.

The number of hours worked per week and number of weeks worked per year were also substantially different, women appearing significantly less productive, with differences similar to those found by Bobula (1980). These differences could be related to the younger age of women. Curry (1983) found the largest productivity differential between men and women occurred in age groups including

women of childbearing age. Female pediatricians of this study saw approximately 30% fewer patients per week than did the men. The AMA (1984) found that, across specialties, female physicians saw 16% fewer patients than did male physicians. The AMA may have included only physicians who see patients (as opposed to inactive physicians, or those primarily in research), whereas this study included all pediatricians in the sample. This difference too could be a result of the different practice arrangements of men and women.

Considering the difference in type of practice and productivity, it is not surprising that female pediatricians had lower incomes than the men. This is a well established difference, found across specialties and age groups (AMA, 1984; Bobula, 1980; Langwell, 1982; Wilson, 1981). Age is likely to have a substantial impact here, since many of these women have simply lacked the opportunity to have established themselves long enough in medicine to command higher incomes.

Male pediatricians were significantly more likely than were women to belong to professional medical organizations, to attend meetings of these organizations, and to belong to a committee or hold office in these organizations. The AMA has also found women to be underrepresented in their own organization (AMA, 1980), and Gooding (1983) found female radiologists were underrepresented as office holders and committee chairpersons of radiology organizations. Therefore, women in pediatrics are not alone in their apparent reluctance to join and lead in professional medical organizations. Here again, age may be a factor, since male pediatricians have had

more time to join and become active in these organizations. Women, conversely, may have an additional impediment imposed on their ability to become involved because of their increased role in the family.

Finally, the last variable considered to be a part of work role involvement concerned commitment to pediatrics in the near future.

Women were significantly more likely than the men to state they would be staying in pediatrics, but once again this may be due to the men's older age, since proportionately more men than women were near retirement age.

Women were considerably more likely than men to have experienced work role permeability, at least as measured in this study. Family obligations created early career problems for more women than for men, and women were more likely to state that family considerations had affected their career choices, a finding documented in other studies (Heins, 1979; Ward, 1982). Female pediatricians were significantly more likely to have experienced a career interruption, almost all of which were due to family reasons. Both Heins (1979) and Quadagno (1978) found male and female physicians equally likely to have had a career interruption; however, as in this study, family obligations were disproportionately the primary cause of interruptions for women. The percentage of women expecting childrearing career interruptions in a study of medical students was higher than what was reported by the female pediatricians (Bonar et al. 1982). Therefore it is possible that these women are managing family and career with fewer complications than anticipated. Another possibility is that the

pediatricians have had fewer children than the number expected by the female medical students.

Female pediatricians rated the constraining factor of being busy at home as a more important determinant affecting their involvement in the AAP than did men. This is not surprising considering their greater involvement in the family role, and may also help explain women's comparatively low involvement in all professional medical organizations.

Sex by age cohort interactions in family and work role involvement, and in work role permeability. The second half of the three hypotheses stated that there would be an interaction between sex and age cohort that would affect the level of involvement in the family and in work, as well as work role permeability. These interactions were not present. The major determinants affecting the level of these variables were sex and the presence of children.

Family role involvement was measured with the interval scale Family Demands, which consisted of the variables assessing marital status, the number of children, and the presence of young children. Family Demands peaked in the 36 to 45 year old age cohort, and, not unexpectedly, was the highest for pediatricians with children. Sex did not differentiate between childless pediatricians, or between parents. The fact that men and women were equivalent in Family Demands, and yet appeared to be different in family role involvement as measured in the first half of the hypothesis, leads to a questioning of the validity of the Family Demands scale. In addition, gender equivalence in family role involvement runs contrary to an

extensive body of literature on family work. The Family Demands scale gave considerable weight to the presence of children, yet did not measure responsibility for the care of these children, or for any other household activity. A scale including items that measured time spent in, or responsibility for, various home related activities may have demonstrated the usually present sex difference.

The Work Role Involvement scale consisted of productivity variables, prestige variables (e.g., belonging to professional medical organizations), and income. Not only was the hypothesized sex by age cohort interaction not present, but the main effect of age was different from what was anticipated. Both men and women increased in Work Role Involvement as they grew older, rather than decreasing as they approached middle age and eventual retirement. The presence of children affected men's and women's scores on Work Role Involvement in opposite directions. Male pediatricians with children had the highest Work Role Involvement overall, while women with children had the lowest. This finding both supports and contradicts what Mitchell (1984) found in relating the number of hours worked with the presence of children younger than age 18. That is, Mitchell found male physicians worked more hours if they had children, but, unlike the present study, his research showed that the presence of children had no effect on women's productivity. Curry (1983) and Cohen and Korper (1976) found that children did have a negative association with the number of hours female physicians worked. The Work Role Involvement scale measured more than hours worked weekly, therefore these results



can only be said to support the trend found in other studies of physician productivity. The large difference in parents' average Work Role Involvement leads to a questioning of the extent of true involvement in the family, and further points out the possible lack of validity of the Family Demands scale. Finally, female and male pediatricians without children achieved the same level of Work Role Involvement, which suggests that sex alone does not explain the typical differences found between male and female physician's work life. Behavior associated with traditional maternal and paternal roles appears to have a substantial impact on involvement in the work role.

The relationship among sex, age cohort and work role permeability was assessed with the Work Role Permeability scale, which consisted of the variables measuring career interruptions, the presence of family considerations affecting career choices, and whether family obligations created early career problems. The major result of this analysis was that women with children experienced far more work role permeability than any other group, including men with children. In fact, fathers were no different in their level of Work Role Permeability from childless pediatricians. Crouter (1984) also found that mothers experienced more family intrusions into the work role than did fathers, an effect that was exacerbated by the presence of young children. Female pediatricians of this study were more likely than the male pediatricians to have young children, so this variable could have had an impact here as well. Basically, these findings support Pleck's contention that women experience more work

role permeability than do men (1977), and again suggest that the Family Demands scale was deficient in its ability to measure involvement in the family.

### Implications of the present results

Although opportunities are now more equitable for men and women in all occupations, including medicine, women still lag behind men in the work sphere. The results of this study suggest that involvement in the maternal role is still an important factor influencing involvement in work. It was expected that male and female pediatricians of different ages would be managing their work and family roles differently, age cohort capturing generational differences in attitudes towards work, family, and parenting. In general, such age differences were not major factors, except in the case of work role involvement. Age was positively associated with greater involvement in work for both men and women. Why then were young female pediatricians not much different from older women? The process of professional socialization into medicine may produce female pediatricians of all ages that are not very distinguishable from each other in attitudes and expectations regarding the intermesh of work and family life. There have been few role models for young female physicians, so it is possible that the options presented to each generation have been essentially the same; either restrict family life to a minimum or make several professional compromises. Rapoport and Rapoport (1971) reported on a "psychosocial lag" between changes that have occurred for women in the macrosocial world of work, and changes

in the microsocial world of the family. This lag generates a problem in adjustment, as the family needs to catch up with changes in the work place. By having always provided the option to women in medicine of working parttime or in a less prestigious and not demanding practice or specialty, medicine appears to be flexible and amenable to family demands. This flexibility, however, has been at the price of lower status for women within the profession. Because of this traditional option, women in medicine may be further "behind" other professional women in sorting out work and family responsibilities in ways that do not entail as many career compromises.

Although the hypothesized interaction between age cohort and sex was not present, in two of the analyses there was an interaction between the presence of children and sex variables. The Family Demands scale aside, women were more involved in the family role than were men, possibly because of the higher likelihood of the presence of young children in women's families. Male pediatricians had more children than did female pediatricians and were also surprisingly likely to have young children at home; however, their family role involvement did not match that of the women. Pleck has suggested that a high income can be used to buy services that will compensate for a woman's decreased family role, an option that may be a less stressful than attempting to increase the man's involvement in the family (1977). Certainly, the average income of a male pediatrician could be used to buy such services as household help and childcare, therefore making it unnecessary for him to increase his involvement in these activities if the traditional provider of these services, i.e., an

unemployed wife, was not available. This argument, of course, should be applicable for female physicians as well, and indeed female pediatricians were likely to employ outside help for housework and childcare. The fact that not all women employed others to supplement their family role suggests that traditional expectations and preferences regarding maternal family role involvement are still in effect, even for women who would seemingly have an extensive range of options regarding the management of this role. Possible structural constraints, such as insufficient income, or lack of quality childcare, may of course be factors. Attitudes of husbands may also influence the willingness of women to continue to work a "double day."

As might be expected, the female pediatricians with children were less involved in the work role than both male pediatricians with children, and pediatricians without children. Fava and Genovese (1983) reported that women combining family and career often mention limiting their career involvement by refusing promotions, or working parttime. These tactics result in women having "untidy careers," or "marginal positions." Given the hypothetical options of either working less and earning less, or working more and earning more, Best (1981) found that women raising young children were much more likely than men to prefer the former option. Conversely, men in the same family life cycle stage were likely to prefer to work more and earn more. Best suggests that the financial and temporal pressures of this stage fosters traditional gender roles, leading to an intensification of the male breadwinner role, and of the mothering role of women. This would appear to be in effect for this study, as male

pediatricians with children had higher Work Role Involvement scores than all the other pediatricians. How fathers are able to achieve such a high involvement in the work role may be because of the benefits of the "two-person career" (Papenek, 1973). The male pediatrician with a spouse not working outside of the home may be able to achieve more in medicine than his single male counterpart because of the smoother management of his home life. Also, the expense of raising children is likely to serve as an impetus for increased work role involvement. Female physicians, on the other hand, are very unlikely to be in a two-person career, as their husbands are likely to also be in a profession, and indeed the complaint, "I need a wife!" is often found in the literature on female physicians. With the possibility of such disparate home lives, it is small wonder the male and female pediatricians with children are at opposite ends of the work role involvement continuum.

Work role permeability was experienced by more women than men, not surprisingly given the difference in work and family role involvement. It is unclear how the relationship between involvement in these two roles and permeability manifests itself. Is it because women have more work role permeability that they are less involved in the work role, or is it because they are more involved in the family role that leads them to experience more work role permeability? This study was not able to measure the causal order of the relationship. Also not measured was family role permeability, in which work life intrudes into family life. The likely recipients of this permeability would be male pediatricians with children—those working the most,

who, ironically, have more family demands to be affected. It is possible that these pediatricians achieve their high work role involvement at the expense of their family life.

It was hypothesized at the outset of this study that Pleck's theory of work and family role involvement and of work role permeability (1977) might need some updating, based on recent societal changes in attitudes about the relationship of family and work. The results of this study do not suggest that a modification is necessary at this time, at least when considering pediatricians. Actual gender role expectations and behaviors have not changed as much as one would have expected. Women with children are more involved than men are at home and less at work, and appear to be especially susceptible to work role permeability. Male pediatricians with children, conversely, are not affected by work role permeability, and are extremely involved in maintaining a provider, breadwinner role.

Modifications in Pleck's theory may be a long time waiting, as long as structural and societal constraints surrounding work life continue to make it difficult for women to fully achieve in their occupations while maintaining a family life, and for men to be able to take satisfaction in a reduced work load in return for a more active role in the family. The acceptance of paternity leave would achieve much in paving the way for an increased role in families for fathers. The lament is often heard in the popular press, and most often comes from working women, yet the need for quality, affordable childcare is a need felt by all members of working families. More flexible work

weeks would allow parents the option of splitting more childcare time with each other, as well as reducing the need to turn every evening and weekend into a marathon errand running session. Businesses that provide services to families need to expand or modify their hours so that working parents do not need to squeeze in errand running during the work day.

Making the scheduling of work and family life less difficult is only part of the battle. Women have done much to bring these demands to the public's eye. What is needed now is a change in society's definition of the primary roles of men and women. As long as women are viewed primarily as mothers, or potential mothers, and men primarily as providers, their increased participation in work and family, respectively, will always be hampered.

#### Limitations of the present study

Although the sample of pediatricians was randomly selected from all board certified male and female pediatricians, and from all non-board certified male and female pediatricians, it was not a pure random sample. Board certified female pediatricians were disproportionately oversampled, while board certified male pediatricians were disproportionately undersampled. Male pediatricians in general were undersampled. As a consequence, the results of this study should not be generalized to the population of pediatricians as a whole. In addition, board certified pediatricians were more likely than non-board certified pediatricians to return questionnaires. Therefore, work and family issues that might be

peculiar to non-board certified pediatricians may have been overshadowed and neglected. Many questions on the questionnaire concerned family issues in relation to the practice of medicine. These questions could have sensitized those most affected, i.e., women with children, and therefore those women experiencing problems related to work and family may have been more likely to respond to the questionnaire.

None of the scales used for testing the interaction of sex and age cohort achieved very high measures of internal consistency, although Ware, Snyder and Wright (1976) suggest that an alpha greater than .50 is acceptable for group comparisons. The Family Demands scale proved to be the most troublesome. Three of the four items of this scale related to the presence of children, and therefore it may not have been measuring direct involvement in the family, but the potential for family demands. Male pediatricians had more children than did female pediatricians and were also more likely to be married (another item in this scale). Given this, it is almost surprising that male pediatrician's Family Demands scores were not higher than those of female pediatricians.

With the exception of the question asking about career interruptions, the questions concerning work role permeability were of a subjective nature. Women may have been more accustomed to reporting such conflicts than men. Therefore, permeability for male pediatricians may have been underreported. Career interruptions for family reasons and problems early in the career caused by family obligations are more likely to occur during the pediatrician's younger



years. The overwhelmingly greater work role permeability of female pediatricians could be because the majority of the women were younger than age 40, and so were more likely to be currently grappling with such issues. The fact that work role permeability was constant across the age cohorts would belie this idea however.

Finally, the issue of the effects of spousal employment on a pediatrician's work and family role involvement, and on work role permeability was not sufficiently dealt with in this study. There is likely to be more role negotiation in families in which both spouses are employed than in families where only one spouse is working. Female pediatricians are likely to be in the former type of family, male pediatricians in the latter. Comparing these two groups while neglecting this issue may have led to an oversimplification of how these pediatricians are managing their work and family roles.

#### Directions for future research

As stated earlier, it is unclear from this study how and when work role permeability begins. A longitudinal study that mapped out increasing and decreasing role involvement and the possible subsequent effects on permeability would help establish the casual order of these events. Better measurements of family role involvement are needed; in particular, measurements of time spent in various activities, rather than simply responsibility for these activities. Daily and more mundane effects of work role permeability—rather than the more catastrophic "career interruption"—could lead to a cumulative overall effect of work role permeability on the career. Of interest would be

the development of a work role permeability continuum. How much permeability can be tolerated without adverse effects on both career and family life? Related is the issue of the supportive nature of the family on work role permeability. True, the family may be responsible for the permeability; however, it may buffer the possible negative psychological effects of the intrusion into the work role, i.e., some families may be "worth" the experience of work role permeability.

Not studied in this research was family role permeability, where one's work life intrudes into the family role. This permeability has long been part and parcel of the male professional's career.

Professional women, such as pediatricians, must now be affected by this permeability. Do women and men deal with family role permeability differently? Does it manifest itself differently, e.g., for women does it mean they cannot attend a parent-teacher conference (an event occurring during working hours), while for men does it mean they are required to work on the weekend (time usually devoted to the family)?

Approximately half of married female physicians are married to physicians. Of interest here would be the study of the relationship of the medical career timetable and the family life cycle of such couples. Do such couples "trade off" career intensification with each other? The biologically logical trade off would be the female slowing down to bear and raise children while the husband built his practice. The question here would be, does the woman get to intensify efforts on her career when the children are older and the husband slows down? The results of this study suggests that the typical male pediatrician

with children does not slow down, at least not until near retirement. The typical male pediatrician, however, is not married to another physician.

Obviously, physicians are not the only professionals that can be studied in this regard. In addition, work and family role involvement and permeability of non-professionals needs to be studied. Those who may not have the financial means to purchase services and products to supplement the decreased family role involvement of wives may negotiate role involvement in an entirely different manner than more well off families.

Finally, changes in work and family roles can be examined in light of the recent demand for a national family policy. Most of the concerns of those lobbying for such a policy revolve around childcare, maternity leave, and child support, issues which currently most strongly affect women's family and work roles. The impact of an national family policy on men's family and work roles will certainly deserve research attention as well.

## SUMMARY

The management of work and family roles of a sample of 2,110 male and female pediatricians was assessed with a self-administered questionnaire. Although there are now more women in the traditionally male-dominated profession of medicine than ever before, it was nonetheless hypothesized that the level of involvement in work, the family, and the intrusion of family demands into the work role (work role permeability) would follow traditional gender role expectations for these pediatricians. This hypothesis was supported. Female pediatricians were more involved in the family role, less involved in the work role, and experienced more work role permeability than male pediatricians. It was expected, however, that male and female pediatricians of different ages would be managing their work and family roles differently, age cohort capturing generational differences in attitudes and behavior towards work, family, and parenting. This interaction between sex and age cohort did not emerge. The presence of children proved to be the major determinant effecting the level of involvement in family, work, and work role permeability. Parents of either sex proved to be equivalent in family role involvement, and were readily distinguishable from childless pediatricians. Male pediatricians with children were highly involved in the work role, while women with children were well below the average in their work involvement. Childless pediatricians of either

sex were comparable, falling between mothers and fathers in their level of involvement in the work role. The presence of children effected work role permeability only for women. Childless pediatricians and male pediatricians with children were roughly equal in their level of work role permeability, which was significantly less than that of mothers.

These results suggest that, in spite of the recent influx of women into medicine, women still lag behind men in the work sphere. The primary reason for this lag is their involvement in the maternal role. Medicine is a fairly conservative profession, and therefore female pediatricians may be further behind other professional women in sorting out work and family responsibilities, while male pediatricians with children remain entrenched in the traditional breadwinner role.

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## APPENDIX

## ISSUES IN PEDIATRIC CAREERS

The questions below address issues about pediatric careers, including training, family, outside activities, and practice characteristics. Please circle the appropriate response or fill in the blank as indicated.

### Post Graduate Training

1. Are you board certified in pediatrics?
    - Yes ..... 1 → **SKIP TO QUESTION 3**
    - No ..... 2
  
  2. The following are some reasons why a pediatrician might not be certified in pediatrics. Please circle the one reason most applicable to you.
    - Less than 2 years post-residency ..... 01
    - Have taken the written exam but not the oral exam ..... 02
    - Have not had the time to prepare for certification or take exams ..... 03
    - Failed exam(s), plan to retake ..... 04
    - Failed exams, *do not* plan to retake ..... 05
    - Certified or becoming certified in another specialty ..... 06
    - Have no plans for becoming certified in pediatrics ..... 07
    - Other (please specify) ..... 08
- 

### Family Life

3. Are you:
    - Married ..... 1
    - Single ..... 2 → **SKIP TO QUESTION 6**
    - Divorced ..... 3 → **SKIP TO QUESTION 6**
    - Widowed ..... 4 → **SKIP TO QUESTION 6**
  
  4. Does your spouse:
    - Work full-time outside the home ..... 1
    - Work part-time outside the home ..... 2
    - Does not work outside home/retired ..... 3
    - Other (please describe) ..... 8
- 
5. Is your spouse a physician?
    - Yes ..... 1
    - No ..... 2
  
  6. Have family considerations affected your career choices?
    - Yes ..... 1 → **HOW?** \_\_\_\_\_
    - No ..... 2
    - Not applicable ..... 3
-

*Home and Child Care Help*

Professionals often seek help with home and child care. Please use the following lists of various types of help to answer questions 7 and 10.

- |                            |                           |
|----------------------------|---------------------------|
| 1. Self                    | 8. Day care               |
| 2. Spouse                  | 9. Boarding school        |
| 3. Children                | 10. After school program  |
| 4. Other relative          | 11. Not applicable        |
| 5. Part-time help          | 12. Other (specify) _____ |
| 6. Full-time help          | 13. Other (specify) _____ |
| 7. Babysitter outside home |                           |

7. We are interested in the kinds of household arrangements pediatricians make. (Fill in the blank with the ONE number from the Home and Child Care Help list above.)

- a. Who does most of the housework? .....
- b. Who most often is responsible for car maintenance? .....

8. How many children do you have? \_\_\_\_\_ (If none, SKIP TO QUESTION 11)

9. When was your first child born?

- |   |   |
|---|---|
| Before medical school .....                 | 1 |
| During medical school .....                 | 2 |
| During residency .....                      | 3 |
| During fellowship .....                     | 4 |
| During first two years after training ..... | 5 |
| Three or more years after training .....    | 6 |

10. We are interested in the kind of child care arrangements pediatricians currently make for their children. (Please insert ONE number from the Home and Child Care Help list above.)

- a. Who provides most of the child care for your children under 6 while you are working? .....
- (If you do not have children under 6, please check  and go to question 10b.)
- b. Who provides most of the child care for your children ages 6–13 before/after school? .....
- (If you do not have children ages 6–13, please check  and go to question 11.)

**Organization Membership**

11. How important to your career is belonging to medical organizations?

- |                            |   |
|----------------------------|---|
| Very important .....       | 1 |
| Important .....            | 2 |
| Neutral .....              | 3 |
| Unimportant .....          | 4 |
| Not at all important ..... | 5 |

12. Do you belong to any of the following organizations?

	YES	NO
Nonmedical/Community .....	1	2
State Chapter of American Academy of Pediatrics (AAP) .....	1	2
National AAP .....	1	2
Other medical societies .....	1	2

13. In 1984, approximately how many meetings of each of these organizations did you attend?

Nonmedical/Community .....	_____ meetings
State Chapter of AAP .....	_____ meetings
National AAP .....	_____ meetings
Other medical societies .....	_____ meetings

14. Have you in the past, or do you now belong to a committee or hold an office in any of the following?

	YES	NO
Nonmedical/Community .....	1	2
State Chapter of AAP .....	1	2
National AAP .....	1	2
Other medical societies .....	1	2

**If you do not belong to the AAP in some way,  
please skip to Question 19**

**For AAP Members and Chapter Affiliates**

15. How old were you when you joined the Academy? \_\_\_\_\_

16. How important to you are the following reasons for belonging to the AAP?

	<i>Very Important</i>	<i>Important</i>	<i>Neutral</i>	<i>Unimportant</i>	<i>Not at all Important</i>
Publications .....	1	2	3	4	5
Continuing Education .....	1	2	3	4	5
Professional Contacts .....	1	2	3	4	5
Child Advocacy .....	1	2	3	4	5
Political or Economic Benefits .....	1	2	3	4	5
Other (please describe below) .....	1	2	3	4	5

17. Would you be interested in serving on committees or running for office in your AAP chapter or national AAP?

	Yes	No	Unsure	<i>Not Applicable</i>
Chapter of AAP .....	1	2	3	4
National AAP .....	1	2	3	4



18. The following are some reasons why a pediatrician might *limit involvement* in the AAP. How important are these reasons to you?

	<i>Very Important</i>	<i>Important</i>	<i>Neutral</i>	<i>Unimportant</i>	<i>Not at all Important</i>
Too expensive .....	1	2	3	4	5
Too busy with work .....	1	2	3	4	5
Too busy at home .....	1	2	3	4	5
Not interested .....	1	2	3	4	5
Travel inconvenience .....	1	2	3	4	5
Don't feel welcome at meetings .....	1	2	3	4	5
Do/does not address issues of concern for me .....	1	2	3	4	5
Other (please describe) .....	1	2	3	4	5

SKIP TO QUESTION 20.

### For those who have not joined either the National AAP or a Chapter

19. The following are some reasons why a pediatrician might not join the AAP (either as an Affiliate, Junior, or Fellow). How important are these reasons to you?

	<i>Very Important</i>	<i>Important</i>	<i>Neutral</i>	<i>Unimportant</i>	<i>Not at all Important</i>
Too expensive .....	1	2	3	4	5
Too busy with work .....	1	2	3	4	5
Too busy at home .....	1	2	3	4	5
Not interested .....	1	2	3	4	5
Travel inconvenience .....	1	2	3	4	5
Not eligible .....	1	2	3	4	5
Don't feel welcome .....	1	2	3	4	5
Does not address issues of concern for me .....	1	2	3	4	5
Other (please describe below) .....	1	2	3	4	5

## Professional Activities

20. Do you provide direct patient care?

Yes ..... 1  
No ..... 2

21. In 1984, approximately how many weeks did you work?  
(Excluding medical meetings, military service, vacation, and similar absences from work) ..... \_\_\_\_\_ weeks

22. How many hours did you work during your most recent complete week of work? (excluding "on call" hours not actually worked) ... \_\_\_\_\_ hours

23. How many patient visits did you have during your most recent complete week of practice? \_\_\_\_\_ visits

24. Which of the following categories includes your 1984 earned income before taxes?

- Less than \$39,999 ..... 1
- \$40,000–\$59,999 ..... 2
- \$60,000–\$79,999 ..... 3
- \$80,000–\$99,999 ..... 4
- \$100,000–\$119,999 ..... 5
- \$120,000 or over ..... 6

25. What were your principal problems in starting your practice or career?

(Circle all those applicable.)

- Finding a location or position ..... 01
- Obtaining cross-coverage ..... 02
- Finances ..... 03
- Lack of peer support ..... 04
- Lack of business training ..... 05
- Family obligations ..... 06
- Lack of mentor or role model ..... 07
- Competition ..... 08
- No significant problems ..... 09
- Other (please specify) ..... 98

26. Have you had any career interruptions where you stopped work or took a nonmedical job?

- Yes ..... 1
- No ..... 2 → SKIP TO QUESTION 29

27. If yes, was the interruption due to: (Circle those applicable.)

- Spouse's career ..... 1
- Childrearing ..... 2
- Other (please specify) ..... 8

28. Did the interruption create problems for your career? Did you:

- |                                     | YES | NO |
|-------------------------------------|-----|----|
| Lose skills .....                   | 1   | 2  |
| Lose patients .....                 | 1   | 2  |
| Lose partners/coverage .....        | 1   | 2  |
| Fall "behind" peers in career ..... | 1   | 2  |
| Other (please specify) .....        | 1   | 2  |

29. Are you planning to leave pediatrics in the next five years?

- Yes ..... 1
- No ..... 2

# Background

30. What is your sex?

- Male ..... 1
- Female ..... 2

31. What issues do you believe will be most important to you or pediatrics in the next five years?

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**THANK YOU. Please return to: ISSUES IN PEDIATRIC CAREERS,  
American Academy of Pediatrics, P.O. Box 927, Elk Grove Village, IL 60007,  
in the enclosed envelope.**

APPROVAL

The dissertation submitted by Sarah E. Brotherton has been read and approved by the following committee:

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The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

4/16/88  
Date

Linda Heath  
Director's Signature