We review current data on types of stressors acting on women physicians, the consequences of these stressors and methods of coping with them. We undertook a systematic review of original articles published in the last 15 years and registered mainly on Medline and on the internet websites focusing on these issues. In addition to the pressures acting on all physicians, women physicians face specific stressors related to discrimination, lack of role models and support, role strain, and overload. The depression rate in women physicians does not vary from that of the general public but the rates of successful suicide and divorce are much higher. Women in academic settings are promoted more slowly, have lower salaries, receive fewer resources, and suffer from a range of micro-inequities. They often lack mentors to provide advice and guidance. They must cope with the pressures of choosing when to have a child and conflicts between being a wife and mother and having a career. Despite these pressures, they report a high degree of career satisfaction. Although women physicians suffer from a variety of stressors that can lead to career impediments, stress reactions, and psychiatric problems, generally they are satisfied with their careers. Personal coping techniques can help women deal with these stressors. Pressures will continue until attitudes and practices change in institutional settings. Some institutions are initiating changes to end discrimination against women faculty. Depression and Anxiety 17:180–189, 2003. © 2003 Wiley-Liss, Inc.

Key words: physicians; women; stress; psychological; depression; suicide; divorce; gender discrimination; mentors; job satisfaction

STRESSES ON WOMEN PHYSICIANS

Physicians in general are subject to multiple stressors. The road to becoming a physician requires many years of hard studying plus an internship or residency with its long hours and the stress of transition from being a student to becoming a responsible professional. Physicians starting out in their careers often begin with large amounts of debt related to their student years. As well, most physicians continue to work long hours, often under pressure from a seemingly never-ending stream of patients whose lives are often literally in the hands of the physician. Both the public and the professionals themselves have high expectations and must deal with the continuing challenge of new knowledge, drugs and technology [Miller and McGowen, 2000]. If a physician enters into the academic world, there are additional pressures to do research, publish, obtain grants, and get promoted. In addition to all of these stressors there is also the need to have some sort of personal life with time for family, friends, and other interests.

Women physicians report especially high levels of stress [Brown, 1992; Gross, 1992; Stewart et al., 2000]. Stewart et al. [2000] noted that, of 196 women physicians,
physicians, 49% reported high levels of stress whereas 44% felt mentally tired. Although these issues are true for both male and female physicians, there are some sources of stress that are unique to or more prevalent amongst female professionals. We review the information concerning these particular stressors, the effects on medical women's health and suggestions for coping with these pressures.

**SOURCES OF STRESS**

The sources of stress on women physicians can be categorized as: problems related to minority status and discrimination; lack of role models, mentors, or sponsors; and role strain. These stressors are not found exclusively in women (e.g., disabled individuals, those from other ethnic groups, and those of non-heterosexual orientation may also suffer from these types of stressors) but they are important aspects of what women face.

**MINORITY STATUS/DISCRIMINATION.** The gender balance in medical schools has changed dramatically in the last 20 years. In the United States in 1999, women constituted 44% of medical school applicants [Association of American Medical Colleges, 1999]. In Canada, in the years 2000–2001, 38.5–60.6% of medical students were women [Association of Medical Colleges, 2000]. As of November 1, 2000, the ratio of females in post-MD training varied from 16.7% in cardiovascular surgery to 100% in medical genetics with averages of 59.8% of trainees in family medicine, 47.2% in medical specialties, and 37.4% in surgical specialties. The AMA predicts that women will make up one-third of all physicians by the year 2010 [American Medical Association, 1997].

Although women are entering medical school in larger numbers, the percentage of women medical school faculty members holding associate or full professor rank remains well below that of men [Tesch et al., 1995; Nonnemaker, 2000]. Arguments that there are not yet enough senior women to achieve these ranks do not stand up to a review of the data. A cohort study found that, after 11 years, 5% of women and 23% of men who had graduated in the same year had achieved full professor rank [Tesch et al., 1995]. Even after adjustment for factors such as children and a lower rate of publications, there was still a significant gender difference. The effects of discrimination could not be ruled out as an explanation for the women's slower rates of promotion. Currently, although the number of female full professors is growing at a rate faster than men, they are still under-represented in leadership positions and it will take 25 years before the proportion of women at full professor rank is even half that of men [Paik, 2000].

Despite the increase in junior female physicians, earlier graduates from medical school still find themselves in the minority compared to male colleagues in their cohort [Sibbald, 2000]. In addition, there are certain subspecialties (e.g., cardiac surgery) in which the percentage of women remains small. Fewer females than males choose surgery [10% v. 27%]. This may be related to a lack of role models and encouragement as well as a perception that surgeons don't enjoy spending time with patients and don't have rewarding family lives [Baxter et al., 1996]. The attitude that women cannot do surgery is still held by many senior surgeons.

An individual who is in the minority can experience intense scrutiny and be the victim of biases and prejudices amongst the majority. Women often suffer from assumptions about their commitment to work and their productivity i.e., that they will quit or work only minimal hours after they have children. They may feel burdened by the expectation they will take more time and be more involved with each patient [Hochschild, 1989]. They may be criticized for their appearance, being viewed in negative terms if they are either too attractive or too “unfeminine.” Women may suffer from discrimination based on sexual stereotyping [Lenhart, 1993]. Qualities generally attributed to women such as being more empathic [Gilligan, 1982], taking more time with their patients [McMurray et al., 2000] or being more caring may be viewed as negative qualities that interfere with being competent and efficient. They may be seen as too passive and unassertive and, therefore, not leadership material. On the other hand, if they show the same type of leadership and decisiveness that might be seen as a valuable asset in a man, they may be described as being too “aggressive” or “bitchy”.

Studies show that women junior faculty often feel included and supported in their departments [Committee on Women Faculty in the School of Science, 1999]. They tend to believe that gender discrimination is a thing of the past and will not affect their careers. It is only as they become more senior that they start to feel its impact.

In The Women Physicians Health Study, 47.7% of female physicians reported gender-based harassment [Frank et al., 1998b]. A random sample of 3,332 full-time faculty at 24 medical schools across the US, found that these women reported rates of discrimination from 47–70% [Carr et al., 2000]. About half of the women had experienced sexual harassment.

Although overt signs of discrimination may be less common, they have been replaced by a variety of “micro-inequities,” events that occur on an individual level of decision making and involve unjust and irrational treatment based on sex [Rowe, 1990]. They arise from powerful but unrecognized attitudes that work systematically against women [Committee on Women Faculty in the School of Science, 1999]. Slights and harassment may be conscious or unconscious including: ignoring or devaluing their ideas; excluding women from activities; attributing their ideas to their male colleagues; eliminating them from consideration for key positions; or frank sexual
harassment [Lenhart, 1993]. Women may not be given the same opportunities to achieve promotion. Rather, they may be exploited by being asked to serve on committees that require a great deal of work but do not result in a lot of credit or recognition. They tend to make lower salaries than men even after adjusting for specialty and their spending fewer hours per week seeing patients [Ness et al., 2000]. They are given less space and fewer resources and awards [Committee on Women Faculty in the School of Science, 1999]. Women are usually expected to absorb slights, sexist remarks and derogatory humor, and may be viewed as overly sensitive or non-team members if they object to any of this behaviour.

Women may suffer from isolation in various ways. They may be excluded from the informal type of networking that may centre around social activities such as invitations for a drink after work or going golfing with male colleagues and, thereby, miss out on the collegial bonding, support, and sharing of information that can transpire in these types of settings. Women may also be pitted against other women in the organization.

The unconscious and subtle nature of some type of micro-inequities often makes it difficult for women to label and address it. There are often limited avenues for reporting and complaining may make the woman appear to be a troublemaker and lead to retaliation [Lenhart, 1993].

LACK OF ROLE MODELS AND SUPPORT. A major obstacle to women's advancing in health organizations or in academic settings is a failure to mentor and encourage them at an early stage. Sponsors or mentors can point them in the right direction and help them understand the things that are important to do to work toward promotions. Mentors can give advice and provide introductions to potential employers or reviewers. They can help women develop a clear and concentrated academic focus that would help generate grants and publications [De Angelis, 2000].

In a study of female surgeons, Ferris et al. [1996] found that 80% of 415 respondents reported they did not have a female mentor. Women faculty are more likely to report that promotion and tenure criteria had not been reviewed with them and they received less guidance in career development [Buckley et al., 2000]. The limited number of women in senior positions may result in few available mentors for younger women. In addition, not all of these women are helpful. Some adopt the attitude that, because they had to tough it out in a man's world, anyone who is asking for special consideration does not deserve assistance. Men can also act as mentors but junior women may hesitate to ask or the men may be reluctant to mentor due to concerns that the relationship may be misinterpreted as a sexual one.

Theories of the psychology of women propose that the establishment of mutually satisfying relationships is an essential component of women's self esteem [Miller and McGowan, 1976]. The pressures of balancing career and family responsibilities often leaves little time for meaningful personal relationships, thereby further diminishing their support systems and potentially increasing stress in women physicians.

ROLE STRAIN. Role strain is defined as the conflict experienced when managing and fulfilling competing but fluctuating role obligations [Brown et al., 1996]. Women have to deal with the stresses and possible conflicts of being a professional at the same time as being a wife and mother. Although male physicians may also be married with children, historically these roles have not appeared to be in conflict. Although many men are now spending more time with their families, it is generally understood and accepted by society that men will work full time and that their career needs might often overshadow the needs of the family. For women there has not been such a clear differentiation between their professional and personal roles. For example, a survey of pediatricians showed that female pediatricians performed 66% of child care and 63% of their household duties whereas male pediatricians performed 19% of child care and 26% of their household duties [Fritz and Lantos, 1991]. Gross [1992] reported that 26.4% of women physicians in her study experienced conflict between career and family as opposed to 6.1% of the men. She found that although responsibility for child care and housekeeping was handled almost entirely by the women physicians whereas 90% of the men had someone else to carry out these activities. Women physicians also have substantially more responsibility for other dependents (adjusted means 21.1 for women vs. 11.9 for men, P < .001) [Carr et al., 1998].

THE DUAL-CAREER COUPLE. Professional women are more likely than professional men to have a full-time working partner [Walker, 2000]. There are problems and benefits related to a female physician being married to another professional. Ideally, in this situation the spouse is supportive and understanding of the type of pressures acting on the wife. If the spouse is also a physician he can serve as an in-home consultant [Mangan, 1999]. A professional couple may also can have a greatly increased income that allows for many benefits.

The professional couple must also deal with the problems of deciding how to share household tasks. Unfortunately many of the daily tedious activities of housework are often left to the woman. Woman physicians appear to be getting wiser, however, about hiring others to help out or lowering their own expectations. The Women Physicians' Health Study reported data from 4,501 respondents and found that women physicians spend substantially fewer hours in all types of housework than do most U.S. women [Frank et al., 2000].

Decisions may have to be made as to whose career comes first. For example, do both enter into specialty training at the same time or does the woman defer her
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ambitions to let her partner get a head start? In marriages between two physicians, wives are more likely to make accommodations in their career based on consideration of the effects on spouses and children whereas men were less likely to do so [Johnson et al., 1992].

Busy professionals might also find little time to be together. When they are at home they may both feel so exhausted that there is little left over for the relationship. There may also be a sense of competition between the partners [Mangan, 1999]. All of these issues can lead to sexual problems and marital difficulties.

All of these issues can also apply to same-sex couples, especially if they chose to have children. In addition, same-sex couples may have to deal with discrimination and lack of support from other conventional couples.

**PREGNANCY/MOTHERHOOD.** Women physicians face a number of problems regarding pregnancy and motherhood. Choosing to have a child rarely affects the man’s career whereas woman physicians with children may encounter major problems. A study of faculty in all academic departments of 24 randomly selected medical schools across the U.S. found that, among faculty with children, women had less institutional support, fewer publications, and lower career satisfaction [Carr et al., 1998]. Female physicians are more likely than males to have made a career change for their children (85% v. 35%) [Warde et al., 1996]. Some women do not feel that it is possible to combine career and families and put their career aspirations first, deciding to remain childless. Perhaps that is why, in a survey done for Medical Economics, a quarter of female survey respondents were childless compared to only 9% of male doctors [Slomski, 2000]. This difference may also be related to woman physicians not being able to find a suitable partner.

If women choose to have a child, the first decision has to do with the timing of the pregnancy. Potee et al. [1999] surveyed 863 women who had matriculated at Yale University School of Medicine from 1922–1999 (70% response rate). Of women in medical school between 1922–1949, no women had a child before or during medical school; 26.1% had children during residency and 73.9% after medical training. Of women graduating from 1950–1989, 42% had children during medical training and 58% after beginning practice. The length of maternity leave also varies. Women who graduated before 1970 (48.6%) took 6 weeks or less of maternity leave and 30% took 7 weeks to 8 months. From 1970–99, less than one-third took less than 6 weeks whereas 54.6% took between 7 weeks to 8 months. Time off also varied with the stage of medical training. 63.4% of women in residency and 55.8% of women in practice returned to work in <10 weeks. Women who had their first child before or during medical school took more time off with 41.1% taking 10–52 weeks and 20.5% taking >1 year.

Women who elect to have a child before entering medical school may feel that at that time they are young, healthy, have more energy, and fewer conflicting responsibilities. There may be greater personal flexibility with less infringement on professional growth and less financial impact of time taken away from a career later on. On the other hand, they may feel a greater sense of isolation in medical school because they are different from their colleagues. They often suffer from a lack of role models. Switching from being a full-time mother to entering medical school may cause a huge shift in lifestyle to which is difficult to accommodate. This may also result in increased stress in medical school as she tries to study while looking after her family.

Women who choose to have their children while in medical school may feel they are still healthy and that there will be less financial impact of time taken away from their career. Life in medical school, however, is already stressful [Brodkin et al., 1984]. The pressure of demanding studies makes it hard to lose academic time. Maternity leaves are generally unavailable and, therefore, the individual is forced to try to continue on in school throughout this time or drop behind her peers. There may be few students who are making this choice that may generally be discouraged by peers and teachers. This may also interfere with the woman’s identity development at this time in her life. She may be faced with financial stress and see her training as onerous rather than gratifying in any way.

Postponing pregnancy until internship may allow for a better development of identity. A maternity leave may also be available. Internship, however, is a stressful time requiring long hours and adjustment to a new role and level of responsibility. The individual may be penalized for losing time and drop behind her peers. Pregnancy-related illness is unpredictable and may require more unplanned time off.

In residency, the individual is still young and healthy and may benefit from available maternity leaves and a more flexible schedule [Paluszny and Thombre, 1987]. In some residencies and fellowships, part-time positions may also be available. The down side is that this usually leads to a prolongation of training. Residency is already physically and emotionally stressful and having a child at this time only adds to the stress. Peers may become increasingly resentful of the woman’s taking time off to have the baby or not being able to do her share of night calls. Senior staff may see her as being less dedicated to a career and, therefore, not consider her for staff positions.

In early practice, schedules may be more under the woman’s control and finances are better. The marriage may have already lasted for a number of years and be more stable. There are, of course, also concerns here. The woman may fear that, if she delays childbearing until this time she may have more difficulties becoming pregnant. As well, if she chooses to have a child at the beginning of her career, she may delay her advancement, resulting in slower progress. After all of her training, she may be ambivalent about postponing her
career to look after the family. As well, at a time when others may be competing for key entry level positions, she may be perceived as being less dedicated and miss out on opportunities.

Dilemmas persist after childbirth. The woman must decide how much time to take off and whether to return full- or part-time. It is often the woman’s responsibility to sort out child-care arrangements. These arrangements are influenced by a number of issues including: finances; the availability of suitable care-takers; the decision as to whether to have someone come to the home or take the child to a day care; fears about the health and security of the child; difficulties in arranging transportation if the child goes out of the home; and the difficulty of coping when the child or the nanny becomes ill. As well, mothers must deal with their own guilt and sadness about not being available full time for their child. A recent survey showed that one-third of women doctors assume the role of child caretaker themselves, 20% have spouses who assume this role, 22% use nannies and 7% use daycare [Walker, 2000]. Sixty percent of women said their spouses cared for the children 10 or more hours per week, an increase from 25% of women who graduated before 1960 [Potee et al., 1999]. Still, women are either directly responsible or responsible for arranging the majority of child care [Fritz and Lantos, 1991; American Medical Association, 1997].

CONSEQUENCES OF STRESS ON FEMALE PHYSICIANS

The consequences of these types of stressors include career and professional impediments, unproductive coping responses, psychiatric disorders, and stress-related symptoms [Lenhart, 1993].

CAREER IMPEDIMENTS

Lack of mentoring may have an ongoing impact on women’s careers. Women are less likely to have had research training and tend to publish fewer articles [Bickell, 1988; Levinson et al., 1993; Sonnert and Holton, 1996]. Women academics receive fewer resources to achieve their goals, including funding, necessary personnel, space and equipment [Carr et al., 1993; Kaplan et al., 1996; Tesch et al., 1995]. In the face of discrimination and harassment and other stressors, women may become less confident, have lowered self-esteem and lose their motivation and ambition [Frank et al., 1998b; Komaromy et al., 1993; Lenhart and Klein, 1991; Lenhart, 1993]. Women often come to believe they are less capable of taking on more senior positions and, therefore, may be less aggressive at pushing for a promotion. They may lose out or give up on opportunities to advance. Their careers may be interrupted or they may decide to abandon their aspirations altogether.

UNPRODUCTIVE COPING

In the face of gender discrimination women physicians may develop unproductive coping responses. They may try to deny that any discrimination exists and, therefore, leave themselves helpless to deal with the potential consequences or impulsively withdraw from the situation rather than trying to straighten it out. They may chronically fluctuate between self-doubt and feeling angry toward others. At times this anger may become inappropriately displaced onto other individuals, reinforcing the idea that women are fragile, emotional creatures. Turning their feelings inward may result in guilt, shame, and isolation. Physicians may turn to alcohol or prescription drug use to control stress.

STRESS-RELATED SYMPTOMS

Women physicians tend to look after their physical health and report exceeding all examined national goals for personal screening practices and other personal health behaviours [Frank et al., 1998a]. The Physician Work Life study, a nationally representative, random, stratified sample of 5,704 physicians, found that women had 60% greater odds of reporting burnout than men [McMurray et al., 2000]. Burnout is a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment [Maslach et al., 1996]. The high levels of stress experienced by many women physicians may lead to somatic symptoms such as headaches, insomnia and appetite changes [Hamilton et al., 1988]. Other stress-related symptoms have not been specifically studied in women physicians but other studies of stress in working women have noted the presence of stress-related symptoms [Brodersky, 1984; Pepitone-Arreola-Rockwell et al., 1981].

PSYCHIATRIC DISORDERS

Information about rates of psychiatric disorders is limited by dated research with methodological limitations. Female physicians may experience major psychiatric disorders such as anxiety, depression, posttraumatic stress disorder, somatoform disorders, substance abuse disorders, adjustment disorders or DSM-IV code diagnosis associated with marital, occupational or relationship problems [Lenhart, 1993].

A study by Welner et al. [1979] reported that 51% of female physicians they selected from the general community had a history of depression. These findings have been criticized for retrospective reporting and a failure to use standardized rating scales. More recently, the Women Physician’s Health Study found that 19.5% of female physicians reported a history of depression, comparable to rates in the general population [Frank and Dingle, 1999]. Depression was most common in those who: were not partnered; were childless; had more stress at home; drank alcohol; had a history of domestic violence, sexual abuse or of a psychiatric
disorder; and who reported more severe harassment, working too much, career dissatisfaction, less control at work and high job stress [Frank and Dingle, 1999].

Overall, the suicide rate for physicians has been found to be higher than the general population, 28–40 per 100,000 vs. 12.3 per 100,000 for the general population [Council on Scientific Affairs, 1987]. The estimated relative risk of suicide in female physicians ranges from 2.5–5.7 in female doctors as compared to the general population and from 3.7–4.5 in female doctors as compared to other female professionals [Lindeman et al., 1996; Miller and McGowan, 2000]. The crude suicide mortality rate is approximately equal for male and female physicians. There is some suggestion that women physicians make fewer suicide attempts than other women but, because they have the knowledge and access to medications, they are more likely to be successful [Arnetz et al., 1987; Frank and Dingle, 1999].

Although the prevalence of alcoholism and illicit drug use among physicians is similar to the general population, [Council on Scientific Affairs, 1995] physicians may be more likely to abuse prescription drugs [O’Connor and Spickard, 1997]. Research on women physicians who abuse substances has been limited by very small numbers of women subjects. A national survey of 5,426 physicians found comparable rates of substance abuse between men and women although the male physicians had significantly greater marijuana use [Hughes et al., 1992]. It appears that women physicians are more likely to use sedative hypnotics and to have higher rates of comorbid substance use and psychiatric disorders than male physicians [McGovern et al., 1997]. Two Canadian studies [de Koninck et al., 1993; Brewster, 1994] found female physicians to be less likely to be heavy alcoholic users than male physicians.

Divorce may also be a consequence of being overstressed. Divorce rates of physicians appear to be 10–20% higher than in the general population [Sotile and Sotile, 1996]. The Johns Hopkins Precursor Study followed a cohort of 1,337 medical students for 16 years [Rollman and Mead, 1997] and found that choice of specialty was significantly associated with the risk of divorce. Although they found that female physicians had a higher risk of divorce than males, after adjusting for specialty and other factors, their risks became equal.

These illnesses and problems are complicated by the fact that physicians often do not get proper care for emotional problems [Firth-Cozens, 2001]. They may feel embarrassed about asking for help. They are frequently perfectionists who find it difficult to admit to any vulnerability. Females may be especially reluctant to validate any stereotypes that they are too emotional and can’t handle the stress associated with being a physician. They may be reluctant to admit to any vulnerability and fearful that going for help may result in their ability to practice being questioned [Miller and McGowen, 2000]. Those who come for treatment may resist assuming the role of a patient and try to orchestrate their own treatment. Treating physicians may be less aggressive in their treatment [Miller and McGowen, 2000], either assuming the physician knows how to treat herself or not wanting to embarrass a colleague by taking a firm stand.

**CAREER SATISFACTION**

Research on career satisfaction in women physicians is contradictory. The Physician Work Life Study found no gender differences in overall satisfaction despite women physicians having more problems related to time pressures, income and control of daily work life [McMurray et al., 2000]. In trying to explain this, social scientists have discussed the “paradox of the contented female worker” who, despite having objectively poorer job quality, reported equal or greater job satisfaction [Phelan, 1994]. They hypothesize that women give more socially desirable responses or have different job expectations or work values from men. In a survey completed for Medical Economics, overall 80% of male and 72% of female physicians felt satisfied with the balance they have struck in their lives [Walker, 2000]. The Women Physicians’ Health Study showed that mental health and career satisfaction were unrelated to time spent on childcare or other domestic activities [Frank et al., 2000]. Interestingly, although the study found that although 84% of female physicians were generally satisfied with their medical careers, almost one-third of them would not go into medicine again if given a second choice [Frank et al., 1999; Paik, 2000]. Women who reported experiencing negative gender bias had lower career satisfaction scores than did other women [Carr et al., 2000].

**COPING STRATEGIES**

In the face of all of these potential stressors, women physicians need to develop positive coping strategies for dealing with their colleagues and handling problems at work and at home. These strategies include both personal ways of dealing with problems as well as ways of pushing for institutional change.

**STRATEGIES FOR WORK**

It is important for women to develop a variety of responses for dealing with micro-iniquities ranging from ignoring them or laughing them off, to deciding to whom to speak or what actions must be taken. Establishing a network of friends to support each other and share coping strategies is extremely helpful.

When the individual woman is faced with a specific episode of discrimination it is important for her to carefully determine the nature of the incident, review her options for responding to it and select the option that fits both the situation and her own personality [Lenhart, 1993]. She must proceed at a comfortable
pace and not feel rushed into making decisions. It is also essential for her to document the events and speak to others, to protect herself from retaliation and minimize further losses. The individual who is undergoing severe discrimination may require counseling to cope with her psychological responses to these stressors and provide an opportunity to openly grieve her losses.

Women need to aggressively seek out mentors. Although not all senior women are willing to be helpful, it is possible to identify those who are willing to act as support persons. It is important for women physicians to remember the difference between a mentor and a role model. Senior women can act as role models, giving advice and guidance as to how they managed a career and a family, dealt with discrimination, learned how to succeed in the system and handled the conflicts between being a doctor and a woman. These discussions don’t necessarily have to occur on a one-to-one basis. Younger women can form their own networks using a senior woman as a source of information and support for the whole group.

A mentor, on the other hand, does not have to be a female but rather a senior individual who can encourage and guide the younger person into the kind of activities that will allow her to succeed. The mentor needs to be someone who realizes that the approach to mentoring women may be different from mentoring men. Women may need more education about protecting themselves from being exploited [De Angelis, 2000]. In their search for senior women to act as mentors, younger women physicians may forget that an interested male can also fill this role. Women may be hesitant to approach senior men and ask for this kind of mentoring, either because of low self-confidence or for fear the relationship may become sexualized. Overcoming these psychological barriers is important to obtain the guidance that seems almost essential for career success.

STRATEGIES AT HOME

There are a number of strategies that may help women deal with the stress of being part of a professional couple. It is important for the couple to set priorities and goals and make sure that they are in agreement. Couples need to reassess their work patterns and make sure there is still time for their relationship. With busy professional lives, free time may not come spontaneously but must be scheduled. The income from a dual career couple can be used to pay for assistance to carry out tasks that would take away from valuable time together. Couples need to communicate constantly, being very explicit about their needs rather than assuming that, if the partner loves you, he/she will know what it is you really want. Obviously the ability to compromise is an important component of these relationships. Female physicians need to be able to ask their partners for help in carrying out various household tasks and also to accept that the partner may not carry out the task in exactly the same way that she would have done it.

If the female physician is contemplating having a child it is important for her and her partner to spend time examining the pros and cons of having and not having a baby. Couples need to consider how their lives would change in terms of child rearing responsibilities, career adjustments, task sharing, personal interests, freedom and time together. Women physicians may have to change their expectations of themselves, appreciating that their lives may not fit social norms and that they do not have to be perfect in every sphere. This can be difficult for women who have had to be hard-driving and perfectionistic to become a physician.

If she decides to have a child, the woman must decide whether she wishes to interrupt her career, slow it down for a while or proceed full force. For some women the concept of role cycling is important, i.e., family or career issues may predominate during different periods of one’s life. If the woman decides to continue working full time she needs to consider how she will deal with the sense of loss she may experience about missing some of her child’s growing up. Subjective rationalization may help her minimize sadness and guilt. For example, rather than feeling she has missed the baby’s first steps, she may choose to think the only “first steps” that count are those she witnesses. Where ever it is possible it is important to use financial resources to help ease the burden, whether it is by hiring the best childcare available or ordering in dinners to reduce stress and allow the maximum time for family relationships.

INSTITUTIONAL CHANGES

As well as making personal changes women physicians should press for institutional changes that could reduce stress on and discrimination against women.

Medical schools and universities need policies supported by the Dean and the President or Chancellor that clearly forbid gender discrimination and harassment. They must be widely published and strongly enforced with clear consequences for those who violate these policies. Regular, repeated sensitivity training regarding gender discrimination should be mandatory. Clear avenues of complaints must be established and retaliation toward complainants forbidden [Lenhart, 1993].

As many women are having children during medical school or training, it would be helpful for universities and hospitals to: provide low cost day care; allow a fifth year for students who wish to start a family [Potee et al., 1999]; and provide parental leave and part-time residency positions. Having ample staffing during post-graduate training (either residents or community physicians) to share the workload and emergency call helps decrease two major sources of stress—overwork and sleep deprivation.
Gender issues committees should be established with strong endorsement from the administration. Offices such as that of the Office for Women's Careers at Brigham and Women's Hospital in Boston provide a model of a program designed to support, encourage and lobby for women to assist them both psychologically and practically in being promoted and moving into leadership positions. These programs can sponsor workshops and seminars to provide career development information including topics such as negotiating for resources [De Angelis, 2000].

To encourage female faculty, universities must understand that, in a group less able to expand working hours because of dependent responsibilities, institutional support may be especially critical for maintaining productivity. “Stop the Clock” tenure and earnings tracks allow women to have children without being penalized [Potee et al., 1999]. Job sharing and part-time positions encourage women to continue working rather than having to make a choice between having a career or a family. Deans and department heads should be enlisted to establish mentoring programs for women. At least two or three women need to be appointed to membership on each promotion and search committee [De Angelis, 2000]. Women must be sought out for influential positions such as department heads and chairs of key committees [Committee on Women Faculty in the School of Science, 1999]. Ongoing communication between department heads and women faculty plus yearly collection of data and dissemination of information re the progress of women faculty is essential [Committee on Women Faculty in the School of Science, 1999].

Fried et al. [1996] reported a number of interventions established at the Johns Hopkins University School of Medicine to correct gender-based career obstacles for women. These interventions included: a clear commitment on the part of the Departmental chair; the establishment of a Task Force on Women's Academic Careers in Medicine (including an operating budget); lectures, workshops and focus groups to educate faculty as to the nature of gender discrimination and bias in academic medicine; moving all standard meetings from weekends and evenings; increased emphasis on mentoring and career development; and salary equity. After 3 years they reported a decrease in gender bias as perceived by men and women. From half to two-thirds of women faculty reported improvements in timeliness of promotions.

CONCLUSION

In addition to the general internal and external stressors experienced by all physicians, women physicians experience stress-related to discrimination, lack of role models and support, and role strain. Younger women may not perceive discrimination as being a problem but are concerned about balancing career and family needs. As women become more senior they become more aware of subtle, often unconscious forms of discrimination that result in marginalization and obstacles to promotion. Stressors may result in career impediments, poor coping responses, stress-related symptoms and psychiatric disorders. Research on the frequency of these disorders is contradictory. More recent evidence suggests female physicians may not have a higher rate of depression than the general population but are more successful at killing themselves when they feel suicidal. They also have higher rates of divorce than the general population.

Despite all of these stressors, there is some good news. Women appear to be getting better at relinquishing household and childcare tasks to spouses and others. Male partners are becoming increasingly helpful around the house. Large-scale research indicates that career satisfaction and mental health of women physicians are not adversely affected by time spent on domestic obligations [Frank et al., 2000]. Women physicians report having generally good health habits and make good use of health screening practices [Frank et al., 1998a]. Institutions are very gradually making changes such as instituting maternity leaves and job-sharing. The MIT study [Committee on Women Faculty in the School of Science, 1999] resulted in dramatic changes, both in attitudes and practical responses on the part of the university administration. This report also led to a meeting of Presidents, Chancellors, Provosts and women professors of nine top research universities including Harvard, Yale and Princeton. They issued a joint statement agreeing to analyze the salaries and allotment of university resources provided to women faculty, as well as to carry out significant reviews of and changes to discriminatory procedures within each university to move toward equitable treatment of women faculty. They undertook to meet again in 1 year to assess their progress. This commitment, plus the increasing number of women physicians may point the way to decreasing stress and increasing opportunities for women physicians.

Acknowledgments. I thank R. Langer and R. Bohn for their contributions in the preparation of this manuscript.

NOTE

Online resources used were: Medline, Medical Student JAMA (http://jama.ama-assn.org/ms_current.dtl), and Western Journal of Medicine (http://www.ewjm.com).

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