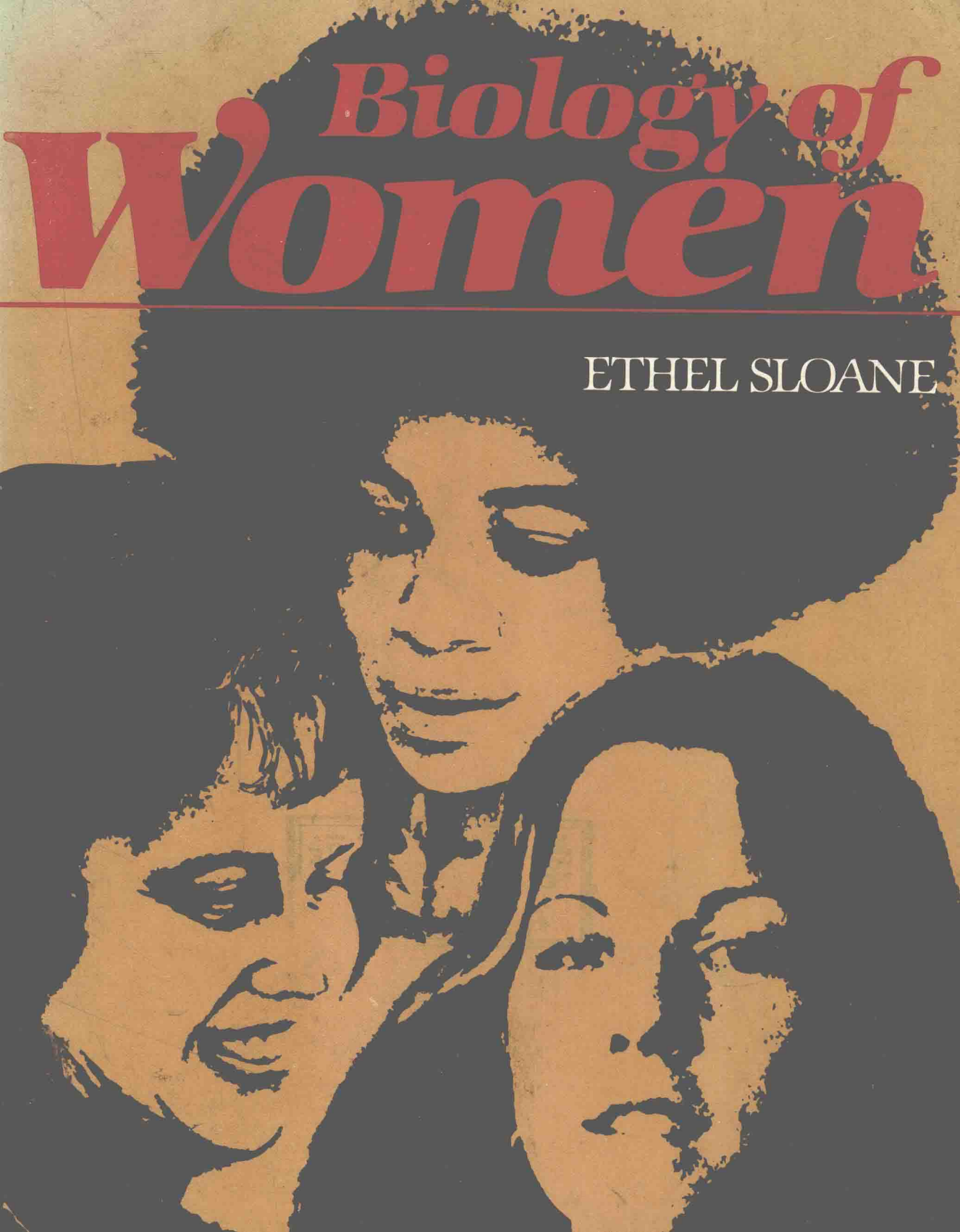
Biology of Women

ETHEL SLOANE



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Preface

This book is about the human female throughout her entire lifespan. It explains biological sex differentiation and fetal development. It is concerned with all the events of a woman's reproductive life from menarche to menopause. It deals with sexuality, birth control, infertility, and pregnancy. It discusses controversies in the treatment of breast cancer and gynecological difficulties. It examines sociological and cultural factors that influence a woman's nutrition, physical activity, and use of cosmetics.

This book is also about health care. Medical information is essential to women—and men—who want to interact intelligently with health care professionals. Without it, many find themselves in an uncomfortable "you doctor, me patient" relationship—a relationship that, as consumers, they resent. Bolstered with information, however, they are able to understand the functioning of their bodies and take responsibility for maintaining and enhancing their health. They can take an active role in a partnership with their doctors. They can make decisions that affect their health based on their own knowledge and personal preferences as opposed to those of their physicians.

Making informed choices is not simple in our society. Health care today is as three-ringed as a circus—consumers are confronted with traditional, alternative, and controversial methods, all purporting to help them become and stay healthy. How are decisions to be made? What *are* the facts, when newspapers almost daily report new health information different from information published the week before, when magazine articles refute one another on what is right and wrong for our health? We all must know enough to choose the methods of being and staying healthy appropriate for us. This book, therefore, examines traditional attitudes toward women's health—common assumptions concerning anatomy, physiology, female reproduction, sexuality, and behavior. It presents the most important research studies on which these assumptions are founded, describes their methodology and results, and encourages readers to form conclusions about their validity. It discusses relevant current research, including clinical studies now

in progress, and suggests other areas in which new studies are necessary. It thus enables readers to weigh reports of medical research that seem to show *both* sides of an issue to be true.

There is nothing mysterious about medicine and human structure and function; it is all knowable, if a woman understands medical jargon and the technical terms that describe human beings. Learning the language of medicine and health enables women to talk to health professionals on a professional level. Many students have told me that as a result of their new knowledge and demands, their doctors have stopped using such words as "womb," "plumbing," and "pipes" during medical examinations. This is gratifying to them; it is another small but symbolic indication that control of their own bodies truly can be theirs.

That medicine can be demystified—that informed men and women are fully capable of participating in medical decisions about their own health and that it is their *right* to do so—is a recent recognition. Only 10 or 15 years ago the notion of patients' rights, of autonomy in health care, was unheard of. Certainly on college campuses there were no undergraduate academic courses that taught women to be well-informed health care consumers. A course focusing fully on female anatomy and physiology in states of health and disease would have been viewed as appropriate only in a nursing or medical school. During the late 60s and early 70s, however, with the rise of the women's movement, came a breakthrough. Today colleges have changed, and women's studies courses, including courses in the biology of women, have proliferated. The biology of women is no longer a radical or barrier-breaking subject. Each year enrollment and interest increase; each year I find my classes filled with more students who have better questions and ideas. Clearly, there is no need now to justify the existence of a course—or a book—on the biology of women. Interest in women's health, with all its political, moral, and emotional ramifications, has extended beyond college classrooms into society as a whole: it has become a concern of everyone, female or male.

It is in response to the expressed needs of women and men, in and out of college, eager to learn about women's bodies in health and disease and to be responsible for their own health care, eager to examine the ways in which scientists produce "knowledge," eager to question orthodox assumptions about women, evaluate the bases of research, and stimulate new thinking and research, that I structure my course in the biology of women. But because no book available parallels my concerns, until now I have had to jerry-rig perspectives for my students; I have had to assign readings piecemeal, from a dozen different sources. Obstetrical-gynecological medical school texts, even in "core" or synopsis versions, require an academic background that many of my students do not have. Moreover, these texts (written by doctors for other doctors or for future doctors) often draw subjective inferences about women as patients; most contain questionable assumptions about women's behavior and needs. Books written by doctors for the layperson—the ask-your-doctor variety—are, to me, condescending and patronizing. Books and pamphlets that have arisen out of the women's movement, worthwhile as they are in demonstrating that women can educate themselves about topics traditionally considered too complicated for their pretty little heads, lack necessary detailed anatomical and physiological information. Many tend, also, to be too "alternative," too polemic for a subject of study that must not be regarded as an alternative. Recently books on one or more aspects of women in health and disease have

become available, but the need for a comprehensive text has not yet been filled. It was with this goal in mind that I have written this book.

It has also been my goal that this book be of value both to people with little or no background in biology and to students in health professions who have taken many courses in anatomy, physiology, and chemistry. I have tried to achieve both broadness of scope and inherent flexibility, in order to provide a book adaptable to various needs: for class use in such courses as biology of women and human reproduction; as a resource in such courses as maternity nursing and gynecological nursing; for health professionals in continuing education programs, members of community-based women's health groups, and individual readers who want to know more about a woman's body and how to care for it. My intention has been to write a book that can be meaningful to any woman at different times of her life, one that any woman can share with her mother, her friend, her husband. It is exactly this sharing of knowledge which is so very important to the women's movement today—women with peer women, women and the generation of women who gave birth to them, women and men, and most certainly, women and their daughters. It is in this spirit, finally, that I have written this text.

Ethel Sloane

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Biology of Women

Figure 1.1. At every stage of the life cycle, women have special health needs and interests. They must have the factual information to aid them in maintaining and promoting their own health as well as easy access to high quality health care.

Contents

1. Women and Their Health

"Taking Our Bodies Back," a movie produced by Cambridge Documentary Films, Inc., makes an eloquent and powerful statement concerning the dissatisfaction of women about the health care they receive, and expresses their growing assertiveness in trying to regain control of their bodies. To people unacquainted with the activities of the women's health movement, perhaps the most startling and controversial portion of the film occurs at the beginning, when a young woman representing the Boston Women's Community Health Center demonstrates vaginal self-examination. In the opening scene, she is standing on a platform in front of a large audience showing and describing a plastic speculum, an instrument that is inserted into the vagina to spread apart the vaginal walls. She jokes about its "duck-bill" bivalves, and says that she had to buy one for her little boy as well as herself because he wanted it as a "quack-quack" toy. The audience laughs, and she goes on, talking rapidly. Moving very quickly now, she climbs up on a table, puts herself into the familiar gynecological examination position, inserts the speculum, and the movie camera and lights focus in to frame . . . absolutely incredible! Both the film audience and live audience are being invited to look at her cervix! The women solemnly file past her, their excitement and interest apparent on their faces. The movie audience too, in the darkened room, is fascinated. Surprisingly, there is no embarrassed laughter, but complete absorption. All the women are seeing a part of a woman's body they have never seen before, a portion of their reproductive tracts that until that moment has been visible only to their doctors—and they are evidently captivated by the sight.

To doctors and many others, this demonstration is a prime example of the lunatic fringe of the women's health movement. Peering into body orifices has always been the prerogative of the physician, and most physicians would like to keep it that way. Why, say the doctors, would a woman want to look at her own, or another woman's cervix? For a woman to buy a plastic speculum and twist herself into a pretzel to do a vaginal examination—what a strange idea! Why would she do it?

The answer to a woman's desire or need for self-examination perhaps has less to do with seeing the cervix, but more with the demystification of one's own body. Most women have an appalling ignorance and hence an uncomfortable feeling about their own reproductive anatomy. Most men do not. The genital organs of a man are exposed, easily visible; they can be seen and touched, and are, many times a day. If any changes occur, the man can note and describe them himself. In a woman, however, the reproductive organs are not easily seen. They are internal and not easily subject to examination. What cannot be seen—a woman's cervix, uterus, ovaries—can almost be forgotten, and yet a woman knows that such aspects of her body are at the very core of her sexuality, of her womanhood. Thus such organs are there-but-not-there, like secrets that women, the owners of these things, cannot understand. What women are, reproductively, remains hidden to them, enigmatic and strange.

If all women took a mirror and a diagram of their anatomy and then viewed and examined their own external genitalia, they would progress tremendously in self-awareness and in the reassurance that everything is "normal." And, since the cervix is the most accessible part of the internal reproductive tract of the female, looking at it, for many women, could be a way of feeling more comfortable about their reproductive organs, a way of dispelling much of the mystique that surrounds them. Some may find it even more helpful if self- and mutual examination is performed within a warm and supportive group atmosphere; others prefer to try it alone. The advocates of vaginal self-examination claim that when it is performed frequently, it is possible to quickly recognize changes indicating pregnancy or a developing pathological condition. Whether *regular* vaginal self-examination is necessary has not been established. The benefits are certainly not as definitive as they are for regular self-examination of the breasts, which is mandatory for women and can mean the difference between life and death in the early detection of breast cancer. For a woman's emotional well-being, however, examining herself even once can be a way of increasing her self-confidence about her body.

The choice of whether or not to look at the cervix is up to the woman. For many of us, knowing *about* our reproductive organs is enough, and we really do not choose to examine them. There are strong cultural taboos stemming from childhood that discourage touching or tampering with one's self "down there." Only *men* are legitimately allowed to touch, and when they are doctors, to examine and describe the reproductive anatomy of females. Not only are the almost completely (91%) male members of the medical profession permitted to do so—continued health and good preventive medicine make it a requirement. And so, once or twice a year, a woman is encouraged to see her doctor for her pelvic examination, and the position, size, shape, and general health of her reproductive organs are checked.

The specialist in obstetrics and gynecology has become the acknowledged expert, the authority within the medical profession on the aspect of a woman's life so highly valued in our society, that pertaining to the sexual organs. Nonpregnant healthy women consult an Ob/Gyn for their routine gynecological examination, and an increasing number of women have no family doctor and rely on their obstetrician-gynecologist for an evaluation of their general health as well. A woman may ask her physician for advice about sexual matters, and she consults him about becoming pregnant or about avoiding pregnancy. She exposes her most intimate self and her

most intimate problems to her obstetrician-gynecologist. He is the doctor a healthy woman sees most frequently.

When a woman visits her doctor, however, the experience is likely to be an ordeal. A female attendant conducts her to one of the small rooms in the doctor's office and prepares her for examination. Stripped of her clothing and much of her dignity, she lies on her back draped in white sheets on the examining table, her feet up in stirrups.

"The doctor will be with you shortly," the attendant says, and leaves. The woman stares at the ceiling until the doctor enters the room. Almost immediately, he sets the tone for their relationship.

"Hello, Julie (or Nancy, or Carol, or Susan)."

"Hello, Dr. Blank."

He raises the draped sheet and inserts a cold metal speculum into her vagina. (Would it be so difficult to warm it first?) He does not tell her what he is doing, or offer to let her see what he is seeing, which would not be impossible with a mirror and a little extra time. Instead, he takes a smear from the cells of the cervix, and withdraws the speculum. Then he puts two fingers of one hand in her vagina, places the other hand on her abdomen, and hurriedly pokes and prods, either saying nothing at all, or making such chatty remarks as "Hmmm, you're kind of small," or ". . . you have a tipped womb," or "an infantile uterus," or "an eroded cervix," without offering any further explanation of his statements.*

When the doctor completes the examination, he tells the woman to get dressed, and that he will see her in his office. She will sit there while he takes or makes a few phone calls. She senses that his attention to her is perfunctory, that she is taking up too much of his valuable time. She forgets most of the questions she had prepared. When he does respond to her, he may make judgmental recommendations concerning her life-style, her decisions about becoming pregnant, or what kind of contraceptive she should use. She feels depersonalized, and thinks she is being treated as a set of reproductive organs. She leaves, dissatisfied, hostile, and further alienated from her body.

Is the foregoing unfair to doctors? Certainly to some of them. Some doctors are less arrogant and authoritarian and more understanding. Not all doctors have sexist attitudes about women, or are brusque, hurried, and unable to communicate with their patients. Not all women mind if they are. Some are so convinced of their physician's competence that, willingly passive, they are able to ignore his evident lack of concern. Many more women, however, who care about and want to care for their bodies, have come to realize that a doctor who is unable or unwilling to communicate with his patients or to treat them as intelligent adults is not a competent doctor, no matter what his capabilities or credentials.

BASIC ISSUES IN WOMEN'S HEALTH

The gynecological examination is only one aspect of health care about which women have become highly critical. Women are angry with the medical profession, and most of the frustration and dissatisfaction, right or wrong, has focused on the obstetrician-gynecologist, the arbiter of women's health care. They trusted their doctors, and be-

* One young woman indicated that after hearing "eroded," she thereafter visualized her cervix, which she thought was located somewhere up around her navel, looking like the side of a mountain after a rainstorm. Another young woman was told "My, your vagina is long and narrow," and wanted to respond, "Well, doctor, maybe your hand is short and fat," but was too intimidated. She now regrets not having said it.

lieved that their physicians were giving them the quality of health care they wanted and needed. Now women are gradually becoming aware of the evident lack of concern and the incredible insensitivity medical professionals in general have for women, and are beginning to realize the health hazards inherent in the treatments women receive. Women are now perceiving their mutual plight as they recognize that their basic health rights have been virtually ignored. Within what they believe is the woman-exploiting tradition of health care:

1. Women have been given hormones to prevent miscarriage, to prevent pregnancy, to keep them "forever feminine," and they were not fully, or perhaps not at all, informed about the potential risks of such treatment, while their doctors ignored or minimized scientific evidence of such risk. The Health Research Group, a Washington-based consumer group, reported that one year after the Food and Drug Administration warned doctors against prescribing progesteronelike hormones for pregnancy testing and prevention of miscarriage, because of the hormones' adverse effects on the fetus, the same number of prescriptions for those hormones, 500,000, were written for pregnant women (Wolfe, 1976).
2. Surgery on women's bodies has frequently been unnecessary and excessive, and they have not been given the opportunity to consider alternatives.
3. Women have been used, often without their full knowledge and consent, as subjects for new medical devices, surgical procedures, and drugs (Wolfe, 1973). They recognize the full extent of "woman-as-guinea-pig" as research done on Third World women and institutionalized women becomes known.
4. Women have not been given the information or the opportunity to make informed choices about birth control. If they choose sterilization as a contraceptive option, they are discouraged and find it difficult and even impossible to obtain this procedure if they are young and childless; if they are young, black, or members of other minority groups, or on welfare, they may be pressured, even forced, into the operation (Coburn, 1974).
5. Pregnancy and the childbirth experience, a natural and normal function, has been turned into a medical problem to be technologically "managed," frequently for the convenience of the hospital and medical staff and to the possible detriment of the child—certainly to the psychological detriment of the mother.
6. Women's mental health is often defined in terms of the social and cultural expectations of the stereotyped feminine role: women's illnesses are frequently perceived as psychosomatic, their reproductive disorders as manifestations of psychiatric disorders, and their demands for treatment as neurotic. It is obvious that male bias exists in classical psychiatry, and some women have even been sexually exploited by their psychotherapists.

The control of women's reproductive processes and capacities, the definitions of their physical and mental sickness and health, and the kind of treatment they are given are all determined by a relatively small group of almost exclusively male physicians. It is possible that some of those determinations may reflect more of the personal biases and prejudices of male doctors than the particular physiological and psychological needs of the women. Even some women who would shrink from the label of "feminist" cannot help but recognize that some of their doctors make de-

cisions about a woman's mind and body not only on the basis of her actual health status, but also for what the doctor presumes that she is or thinks that she should become.

There is evidence that misconceptions and unwarranted assumptions about female anatomy, physiology, and psychology are included in medical education. In a widely quoted study called "A Funny Thing Happened on the Way to the Orifice: Women in Gynecology Textbooks," Diane Scully and Pauline Bart surveyed 27 gynecology books published between 1943 and 1972 (1973). They discovered that the books were consistently biased toward a greater concern with the husband of the patient than with the patient herself, and that women were described as anatomically designed to reproduce, raise, and nurture children and to keep their husbands happy. At least half the books stated that the female sex drive was weaker than the male's, that a woman was more interested in sex for procreation rather than for enjoyment, that most women were frigid, and that the vaginal orgasm was the only true response. These kinds of opinions would necessarily hamper a physician from dealing objectively and effectively with women patients.

WOMEN AS HEALTH CARE CONSUMERS

Women are not alone in their disenchantment with the medical profession. There is a growing and almost universal dissatisfaction with the quality and kind of health care people receive, and with the attitudes of physicians in traditional doctor-patient relationships. Women, however, are the predominant consumers of health care. By all indices of measurement of illness, women evidently get sick more often than men. They have more days of restricted activity associated with acute conditions, more days of bed rest, more physician visits, and more discharges from short-stay hospitals than men (Nathanson, 1975). They take more prescription drugs in all categories, and receive two thirds of all the prescriptions for psychoactive (mood-elevating or tranquilizing) drugs. It is not, however, to be inferred that women are less healthy than men. Women live longer—a female baby born in 1977 has a life expectancy at birth of 75.7 years, exceeding that of a male baby by more than eight years—and women experience lower death rates than men for all causes except diabetes mellitus. Women, however, do report symptoms of both physical and mental illness more frequently than men. Of course, it may be that they report more illness than men because it is culturally more acceptable for them to do so. Women are thought of as the weaker sex, and illness is perceived as weakness, whereas strength, vigor, and good health are typically "macho" qualities, and men are held to a more rigid standard. As explanation for the greater number of psychogenic disorders in females, Jean and John Lennane speculate that doctors may perceive some complaints of women, such as menstrual cramps, morning sickness, labor pains, and "colic" in their babies, for which scientific evidence clearly indicates an organic cause, as arising from women's frustrations, anxieties, or depression (1973). Such dismissal of disorders as "neurotic," say the Lennanes in the *New England Journal of Medicine,* may be a form of sexual prejudice on the part of their physicians.

For whatever reasons, it is evident that males and females utilize health services differently. Women, moreover, have a unique problem within the health-care system because they are, as indicated, the predominant *consumers* of health care, while men are the predominant *providers.* Although the labor

force of 4.5 million health workers is more than 75% female, women in the field are poorly paid, poorly organized, and have virtually no decision-making power. Policy is set by a relatively small group of almost exclusively male doctors, hospital administrators, medical school deans, and pharmaceutical industry executives. They are extremely well organized through their professional organizations, and are very well paid, their incomes having increased inordinately over those of other health workers since 1949 (Navarro, 1975).

WOMEN AS HEALTH CARE PROVIDERS

Women are practically nonexistent in the power positions of the health-care system. From 1970 census figures, 91% of the physicians are male, as are 97% of the dentists, 96% of the optometrists, and 88% of the pharmacists. Women form the large group of nurses (almost 900,000), dieticians, occupational and physical therapists, social workers, and medical technologists, and the even larger group of clerical and service workers. The participation of women in the health-care labor force has been highly segregated, and has been chiefly limited to supportive or auxiliary positions. The health team is a hierarchy, and at the top are the unquestioned leaders: the upper-middle-class, predominantly white, male physicians.

It is this elite structure that defines the illness, decides whether or not hospitalization should take place, prescribes the drugs, and determines the nature and extent of the treatment. If the status of women as both consumers and producers of health care is to improve, a major change will be necessary—the admittance of women to the prestigious health professions, and the participation of women from all economic levels in decision-making jobs in the health care system.

There is evidence that substantial change has already occurred in the familiar "my-son-the-doctor, my-daughter-the-nurse-therapist-dietician" tradition. In 1968–1969, women comprised only 4 of the students entering medical schools. However, according to the Association of American Medical Colleges, by 1977–1978, 40% of the 15,977 freshmen were women, and it is likely that admissions of women applicants will further increase in the next decade. When nearly half of the medical students are women, the processes of medical education that socialize physicians toward sexist attitudes will be modified, with a resulting improvement of medical services for women and all of society.

At present, however, women medical students frequently face discrimination during their medical education. As Margaret Campbell points out in *Why Would a Girl Go into Medicine* (1973), women are discriminated against institutionally and individually, in terms of recruitment, admissions, financial aid, health services, lodging, and because there are few, if any, senior faculty women as instructors or administrators. This prejudice is unquestionably illegal, and specifically prohibited by Title IX of the 1972 Education Amendments to the Civil Rights Act.

Women students also encounter both overt and subtle discrimination by being teased, baited, called on in class too much or not at all, or by being asked how many hours they will work, or how many years they will take off for childbearing and rearing. There have always been certain specialty residencies virtually closed to women physicians, such as orthopedic and vascular surgery, neurology, cardiology, or therapeutic radiology. This,