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Preface

We are rapidly approaching the end of two decades of publication of the *Annual Review of Nursing Research* (ARNR) series. This nineteenth volume follows a pattern established in the eighteenth, that is, the entire volume is devoted to one area of nursing research. In this nineteenth volume the focus is women's health. Drs. Diana Taylor and Nancy Woods, well-known scientists in women's health research, have served as volume editors. They selected the content as well as the authors; their editing created this comprehensive volume.

Drs. Taylor and Woods set the tone for the volume in their introductory chapter, "What We Know and How We Know It: Contributions from Nursing to Women's Health Research." Also in Part I is a chapter by Linda Andrist and Kathleen MacPherson. These authors explore the research on menopause as an example of nursing's contributions to feminist scholarship.

Part II includes three chapters focused on women's social roles. Angela Barron McBride and Cheryl Prohaska Shore review the research on women as mothers in chapter 3. Marcia Gruis Killien, in her chapter on women and employment, focuses on the past decade of research in this area. And in chapter 5 Margaret Bull describes research on women's roles as family caregivers.

Part III includes two chapters of research reviews focused on diversity and women's health. Linda Bernhard reviews research on lesbian health and health care and Karen Aroian describes immigrant women and their health.

In Part IV, the focus is on reviews of women's health and illness. Cheryl Cahill describes the research on women and stress in chapter 8. Kathryn Lee reviews sleep and fatigue in chapter 9. Chapter 10, authored by Janice Humphreys, Barbara Parker, and Jacquelyn Campbell, includes a review of research on intimate partner violence against women. And the final chapter includes a review of gender-based biological research by Nancy Reame.

As with previous volumes, the editors owe a significant debt to the scientists who contributed to the review of chapter drafts, and who helped us

to hone the topics and chapters into the essence that appears in print. Also, we wish to recognize the many nurse-researchers whom the authors cite in their chapter reviews. We hope that we have done justice to your work. ARNR Advisory Board members have been loyal supporters of our continuing efforts to describe the "state of the science" no matter what the specialized topic chosen for the volume. We wish to recognize their contributions to the selection of topics and also the ongoing support that they have provided to the ARNR series editor.

JOYCE J. FITZPATRICK, PHD, RN, FAAN
Series Editor

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We thank Dr. Joyce Fitzpatrick for her editorial encouragement and thoughtful review of every aspect of this project. We sincerely acknowledge Springer Publishing and editor Ruth Chasek. We especially thank Pamela Lankas, Production Editor, to whom we are indebted for extremely capable editorial assistance. In addition, we are grateful to Claudia Schumann at the UCSF School of Nursing for her assistance with manuscript preparation and coordination.

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PART I

Introduction

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Chapter 1

What We Know and How We Know It: Contributions from Nursing to Women's Health Research and Scholarship

DIANA TAYLOR AND NANCY WOODS

ABSTRACT

In this first chapter, we trace the historical roots of nursing research and scholarship focused on protecting and promoting women's health. Beginning with Florence Nightingale, modern nursing's first researcher, who focused on the health impact of women's daily lives through her detailed observations of human behavior. More recently, nursing's contributions to women's health over the past 30 years have redefined women's health, proposed new frameworks for understanding women's health; provided reviews of the women's health literature across disciplines; developed communities of nurse scholars and researchers focused on new areas of women's health research; generated and expanded the knowledge base for women's health practice and education; promoted a global view of women's health; and proposed new models for women's health care delivery. Clearly, a community of nursing scholars, developed over the past 25 years, has contributed to advancing women's health knowledge and improving the health and well-being of women. Without the benefit of a crystal ball, we suggest that nursing will continue to provide leadership in the conduct and the application of research to improve women's health and women's lives.

Key words: feminist scholarship, nursing research, research methods, women's health

In this chapter we will highlight some of the historical contributions of nursing to women's health and women's health care with an emphasis on our contribu-

tions to women's health scholarship, and consider nursing's future contributions to women's health as a field of study. In the chapters to follow, 11 nurse-researchers have reviewed the knowledge base generated by the past decade of nursing research focused on an expanded view of women's health and illness. Clearly, nursing research in women's health has continued the shift in scholarship from "critique-to-assertion" described by Angela McBride in the early 1990s (McBride & McBride, 1993). The resulting chapters collectively demonstrate that nursing research for women's health is concerned about the overall wellbeing of women-as-women, their "dis-eases," and not only their diseases (Stevenson, 1977). And while this decade of nursing research uses critique in the development of new and relevant research questions, this body of research asserts an expanded foundation of science, theory and values toward the improvement of women's lives.

ORIGINS OF WOMEN'S HEALTH IN NURSING

Nurses have engaged in the work of women's health care since the time of Florence Nightingale. Indeed, Nightingale wrote *Notes on Nursing* as a text to guide women in their ministrations to their families, and in the process offered women an opportunity to harness their intellectual abilities to care for the sick. Nightingale was also the first nurse researcher to focus on the impact of women's daily lives on their health through her detailed observations of human behavior. Consider this quote, describing her observations of women's lives, from *Notes on Nursing* (ref date): "Why do they sit up so late or get up so early? Not because the day is not long enough but because they have no time in the day to themselves." As such, Nightingale's writings are an important part of the history of self-care, a movement that re-emerged in the 20th century and became linked to the contemporary women's health movement. Another of Nightingale's contributions, less well known than *Notes on Nursing*, is her essay "Cassandra." In her essay, Nightingale pointed out that women of her day had intellect but lacked the opportunity to use it! What we may not appreciate about Nightingale's vision was her attempt to broaden opportunities for women beyond those available to her contemporaries.

In the U.S. nursing's efforts to improve women's health can be traced to the care our profession provided to women and their children. Lillian Wald's work among the poor women of New York, Margaret Sanger's efforts to help women control their fertility, and Mary Breckenridge's efforts to provide maternity care in the rural Kentucky Hills are a few examples.

Nursing has also had a unique presence in the contemporary women's health movement, part of the feminist movement and the popular health move-

ments of the 1960s and 1970s. We have been active critics of the health care system for women in the United States. We have been political and community activists in collaboration with feminist groups, self-help groups, and grassroots organizations to revolutionize women's health. Few nurses, however, were visible in the early descriptions of the women's health movement. Instead, we were organizing, implementing, and advocating feminist positions, often from within the health care system. Not until the early 1980s did we see independent nursing voices emerge in the published literature. These nursing researchers of the 1980s were the social and political activists of the 1970s.

Nurses with a concern for women's health have historically included feminist approaches in their clinical practice as well as their scholarship. For example, the Boston Women's Health Book Collective authored *Our Bodies, Ourselves* in the late 1960s, early 1970s, depending on which version you count as first. There were a few nurses who have been part of that collective, e.g., Kathleen MacPherson, a leading feminist scholar of women's health, and Nancy Reame, a feminist physiologist and nurse. Along with the many members of the BWHBC, they helped to produce the feminist handbook to acquaint women with their bodies, empowering women by demystifying health care. The new *Our Bodies, Ourselves* is now in its fourth edition (Boston Women's Health Book Collective, 1973, 1998) and has become a classic treatise on women's health.

A feminist nurse-scholar and president of the National Organization for Women, Wilma Scott Heide, wrote about social responsibility and political activism as critical principles for all health professionals (Heide, 1985). In 1981, a group of feminist nurses published the first edition of a news journal titled *Cassandra: A radical feminist nurses newsletter and journal* with the goal to present feminist critiques and book reviews on nursing issues and provide a network for feminist nurses. A major goal of Cassandra was to support nursing research that employed feminist approaches and explored new dimensions of women's health.

Despite nurses' participation in many aspects of the women's health movement, some feminists, concerned with promoting opportunity for women, at times ignored their sisters in the traditional women's ghettoes and instead advocated for women in nontraditional occupations. When feminist scholars did focus on nurses, it was often with the same disdain they expressed toward physicians. The kinder critique of the 1990s has helped infuse our practice of women's health with a richer understanding of the intersection of gender, race, ethnicity, and class.

In the past decade, multidisciplinary efforts have increased our power to institute change in women's health status, building on the wisdom of early pioneers and combining the strength of all women's voices. Efforts to expand

the knowledge of women's health and illness beyond the biomedical model began with clinicians and researchers closely associated with allopathic medicine—health psychologists, nursing and social scientists (Daly, 1978; Woods & Hulka, 1979; Marieskind, 1980; Verbrugge, 1980; McBride & McBride, 1981; Fee, 1983; Duffy, 1985; Lewin & Oleson, 1985; Shaver, 1985; Woods, 1985; Chinn & Wheeler, 1986; Zambrana, 1987; McBride, 1993; Dan, 1994; Woods & Fogel, 1995; Taylor & Woods, 1996). New paradigms have been proposed and are being implemented to enhance women's health from a biopsychosocial and cultural perspective. For example, in 1978, radical feminist scholar, Mary Daly had first used the term "Gyn/Ecology" to describe an alternative model of medical services for women, otherwise considered a "sado-ritual system." Building upon Daly's critique, Angela McBride, philosopher and nurse, proposed new theories for women's health in 1981 followed by a 1993 proposal for a "GYN-ecological practice-research agenda" for women's health. Theories have been operationalized as new models for women's health care delivery (Taylor & Woods, 1996). Nursing has challenged the profession to consider policy recommendations for nursing practice, education, and research for women's health. Clearly, women's health and women's health care have been stimulated by nursing scholars, nursing clinicians, and nursing activists.

NURSING CONTRIBUTIONS TO WOMEN'S HEALTH SCHOLARSHIP

Nursing's legacy of keen observation, combined with a focus on the multiple environmental factors that influence human health and illness, has been the foundation for contemporary nursing research in general and women's health research in particular. More recently, nursing's contributions to women's health over the past 30 years have: redefined women's health; proposed new frameworks for understanding women's health; provided reviews of the women's health literature across disciplines; developed communities of nurse scholars and researchers focused on new areas of women's health research; generated and expanded the knowledge base for women's health practice and education; promoted a global view of women's health; and proposed new models for women's health care delivery.

Developing Communities of Scholars and Researchers Focused on New Areas of Women's Health Research

Researchers and scholars at U.S. schools of nursing have provided leadership in the development of women's health research. In the early 1980s, faculty

and students (lead by Beverly McElmurry and Carol Leppa) at the University of Illinois in Chicago launched a graduate concentration in women's health that provided critical reviews and synthesis of extant literature by women's health scholars. This group gave voice to nursing's contributions to women's health by naming the assumptions regarding the health care of women, for example: 1) the human body, mind, and spirit form a whole; 2) events and interactions in the family, community, and world affect and shape the health of women; 3) control over one's body is a basic right; 4) lived experiences are the starting point for future action; and 5) the health of all is improved by focusing on women's health (McElmurry & Huddleston, 1991). They furthered our understanding of nursing's contributions to women's health by labeling and categorizing our published work in the bi-monthly literature review, *Women's Health Nursing Scan* from 1985–91 followed by four volumes of women's health reviews (Leppa, Miller, 1988; Leppa, 1989; Leppa, 1990; McElmurry & Parker, 1993; 1995; 1997). These important reviews provided us with new visions and theoretical frameworks for subsequent empirical investigations, practice innovations, and new policy perspectives.

Nancy Woods, Joan Shaver, Margaret Heitkemper, Ellen Mitchell, and Martha Lentz started the first NIH-funded Center for Women's Health Research at the University of Washington in 1989. Each has developed independent programs of research in interrelated areas of women's health that have provided a foundation for doctoral and post-doctoral research training.

In the early 1990s, Alice Dan established the Center for Research on Women and Gender at the University of Illinois, Chicago campus, where she has provided postgraduate research training in women's health as well as providing a forum for interdisciplinary research collaboration and dissemination in new areas of women's health research.

Reviews of Women's Health Research & Scholarship: 1980–1996

Nursing scholars have provided some of the most extensive reviews of the literature related to women's health research over the past 15–20 years. We are fortunate to have this foundation of scholarship that combined feminist values, ethics, and sound methods of inquiry to improve women's health care and the education of women's health care providers and to encourage the marked growth of nursing research in women's health. Earlier reviews of women's health research included research across disciplines conducted by physicians, psychologists, sociologists, and health service researchers in addition to nurses.

The predecessors to this review of nursing's contributions to women's health research were Woods' (1988) review of women's health research in

the seventh volume of the *Annual Review of Nursing Research*, published by Springer (Fitzpatrick, Taunton, & Benoliel, 1988); the three volumes on *Women's Health Perspectives: An Annual Review* published by Oryx Press (Leppa, Miller, 1988; Leppa, 1989; Leppa, 1990), and three volumes of the *Annual Review of Women's Health* edited by McElmurry and Parker (1993, 1995, 1997) published first by the National League for Nursing and subsequently by Jones and Bartlett Publishers.

In the seventh volume of the *Annual Review of Nursing Research* (Fitzpatrick, Taunton, & Benoliel, 1988), the review of women's health research by Nancy Woods was relegated to the last section titled, "Other Research" along with reviews on human information processing and nursing research in the Phillipines. In spite of defined inclusion criteria and few journals focused on women's health research, 175 research reports published between 1980 and 1985 were included in this review. In addition to providing a categorical analysis of the research, integrative reviews of two areas of women's health research in which significant contributions were made by nursing scholars were included (perimenstrual symptoms, women's roles and health). The focus of nursing research in the early 1980s was on: (1) women's lifespan or developmental issues (83 reports) with the majority dealing with young adult women; (2) wellness–illness dimensions such as health promotion needs (67% of the reports); (3) contributions to nursing science and practice with the majority extending nursing knowledge of how women adapt to health and illness states (59% of the reports); (4) the use of two major research paradigms—the positivist-empiricist and the historicist with only 39% of the reports including an emphasis on the context for women's health experiences; and (5) research measurement and methods for women's health research. Based on this extensive review, multiple recommendations were made that would provide the basis for nursing's agenda for women's health research in the 1990s. Building on nursing's scholarship in the previous 15 years, Dr. Woods provided a broad yet specific vision for future women's health research. This consisted of: (1) greater emphasis on adolescent, middle-aged, and elderly women using cross-theoretical perspectives of biological, psychological, and social development; (2) maintaining emphasis on health promotion and prevention and promoting greater emphasis on knowledge about women who are ill, disabled, or recovering from illness; (3) emphasizing greater understanding of the physical and social environments that support or damage women's health and the means by which they influence health; (4) expanding research paradigms beyond those rooted in logical positivism to include multiple modes of inquiry; (5) increased emphasis on clinical therapeutics for women as well as work on the contexts that promote women's health; (6) expanding the use of research methods to study dynamic processes such as the menstrual cycle

and adjustment to chronic illness; and (7) focusing on experiential, dynamic analyses of women's lives, including transitions to and from parenthood and employment.

In the three annual reviews on women's health perspectives, Leppa and associates at the University of Illinois-Chicago School of Nursing pioneered a standard for subsequent literature reviews by establishing criteria and classification for the selection of topics and content that concerned women only or influenced them differently. Categories that summarized the literature reviewed were labeled women's characteristics, development across the life cycle, health promotion and maintenance, women as providers of health care, delivery of health care to women, health and work, reproductive health, physical diseases and health problems, mental health/illness, and therapeutic interventions (including drugs and devices). Additional categories included articles about research issues, theoretical perspectives, and ethical/economic/political/policy concerns of importance to women's health. Multidisciplinary perspectives were included in these reviews; authors represented scholars and clinicians from nursing as well as from biomedical, social, and behavioral disciplines. Theory and policy perspectives were reviewed in addition to research and clinical reports.

McElmurry and Parker have taken up where Leppa left off with the publication of the *Annual Review of Women's Health* in 1993 and two subsequent reviews in 1995 and 1997. These reviews of women's health continued to apply the classification framework established by the previous reviews. Contributors provided integrative reviews of the latest findings in some previously reviewed topics (childbearing, sexuality, mental health, and alcohol & drugs) and some emerging areas of concern (e.g., contraception, weight control, occupational issues, cardiovascular health, STDs, and midlife women's health). While the topics included in this annual review illustrate the content categories established by the University of Illinois-Chicago, there were some notable differences from the earlier *Women's Health Perspectives Annual Review*. For example, all contributors were nurses and all but one was from an academic setting. Clearly, by 1993 there were many nursing scholars who identified with a women's health focus, and nursing research on (and for) women's health had markedly increased. While some contributors reviewed a broad range of literature on a particular topic (books, audiotapes and pamphlets reviewed by Denise Webster in her review of women's mental health), most authors narrowed their review to the published, peer-reviewed, research-based literature. Most contributors, however, continued to apply a feminist framework in their literature critique and analysis. A few reviews recommended clinical changes (treatment of women with cardiovascular disease), policy changes (women and employment), or attention to methodological issues in women's health research.

In the second (1995) and third (1997) volumes of McElmurry's *Annual Review of Women's Health*, topics were expanded to focus on emerging women's health problems and the boundaries expanded to incorporate an international focus as well as the recognition of the impact of social environments (family, community, society, race, class, politics) on women's health. New contributions to the 1995 review included topics on health in older African American women, health promotion and maintenance, delivery of health care to women, HIV infection and AIDS, depression in Hispanic women, drug use and violence, and international reproductive rights. New topics in Volume III presented integrative reviews on sexual harassment, clinical trials in older women, menopause, violence against health workers, lesbian women's access to health care, community-based services for vulnerable populations, autoimmunity and gender effects, hypertension management, suicide in Latina female youth, domestic violence against women and children, and female circumcision. In total, these three volumes provided an overview and analysis of women's health research and scholarship conducted across multiple disciplines that spans almost two decades between the late 1970s and 1997.

The science of women's health, as shaped by nurse researchers, grew from the redefinition of women's health to proposing new conceptual frameworks for studying women and development of methodology and methods for studying women's health to the generation of new knowledge about several aspects of women's health.

Redefining Women's Health

The feminist critique has moved us to reconsider women's health and, in fact, to redefine it. Angela McBride's 1982 treatise on women's health and its philosophical underpinnings asserted that clinicians and researchers alike needed to concern themselves with health as well-being, not just women's diseases. She advocated that women's health was more than reproductive health, although reproductive health was a significant part of our health. McBride argued that the goals of attaining, regaining, and retaining health should frame our practice with women. She urged us to ground our understanding of health in women's lived experiences. In brief, McBride urged us to redefine women's health from gynecology (the study of women's diseases) to gyn-ecology (the study of women's health in the context of women's lives).

Moreover, nursing literature reflects a definition of health that is grounded in everyday life, with functional status, role performance, adaptation to environmental demands, and high-level wellness all dimensions worthy of study—not just clinical definitions of health such as risk factors and diseases (Woods et al., 1988). In addition, our broader definition of women's health has brought

us into conversations about the critical intersection of gender with race, social class, and sexual orientation. We have also expanded the definition of who is a woman (Taylor & Woods, 1996; Taylor & Dower, 1997).

Although the NIH research agenda on women's health did not appear until 1991 (U.S.P.H.S., 1992), it is important to reflect on the fact that the nursing profession published significant works on women's health earlier. Indeed, the *Journal of Obstetrics & Gynecologic and Neonatal Nursing* was first published 29 years ago and the *Journal of Health Care for Women International* was first published 22 years ago.

Another important dimension of redefining women's health is appreciation of the developmental dimensions of health. Redefining health as having a developmental trajectory has encouraged many of us to engage women in longitudinal studies, for example, those focusing on the menopausal transition. Not surprisingly, Angela McBride's first book was entitled *The Growth and Development of Mothers*, a treatise focusing not only on the infant but also on the woman in the picture.

In this volume, Linda Andrist and Kathleen MacPherson review nursing's contributions to redefining women's health using women's transition through menopause as an example. In their review of nursing research over the past 15 years, these feminist nursing scholars demonstrate that nursing research has helped to refocus women's development and developmental transitions as normal rather than deficiency conditions that need medical treatment. Nursing's contribution to redefining women's health has also included women's diversity which is illustrated by their review of cross-cultural perspectives of women's midlife transitions. Feminist methods of inquiry have also been expanded by nurse researchers in their quest to redefine the "health" in women's health. They describe nurse investigators' use of methods such as researcher-in-relation, reflexivity, and social transformation to understand menopause within the context of women's midlife experiences. In their conclusion, Andrist and MacPherson chart a course for future investigations by proposing that women's lived experience should be the critical starting point for all scholarly efforts involving women's health as well as health care delivery.

Changing Conceptual Frameworks

New frameworks for studying women's health put women at the center of the inquiry, not on the periphery. Early studies of maternal child nursing had focused on the infant, with the mother a part of the context. Recent literature reflects the woman as the mother, the primary concern of the investigator.

Foundations of women's health research include theoretical models of human health, illness, therapeutics, and the interaction of the individual woman with physical, social, political, and cultural environments. Inherent in this theoretical framework are the values of health, holism, and person–environment interactions. An individual is recognized as a complex whole with multidimensional needs achieving a healthy state through a process of interaction and balance with a personal, physical, and social environment (Barnard, 1980; Hall, 1984). Many nurse theorists have proposed conceptual models to guide nursing practice, but validation of these models in the clinical setting has lagged behind development (Stevenson & Woods, 1986). Most studies on interventions and care for women's health have been non-experimental or have assessed single procedures and treatments. Few studies have assessed the impact of interventions on complex person–environment relationships.

Shaver's human ecological model (1985), providing an important theoretical framework for women's health research, is based upon the interaction of the individual with the environment and the influence of that interaction upon health-related behavior. Although this model improves understanding of environmental influences upon personal behavior, it does not explain the importance of the physical and sociopolitical elements of the environment that have significant impact upon the health of many women, especially the poor and disadvantaged. Williams (1989), in her feminist critique of health promotion in the United States, rejects the emphasis on individual behavior as the most important determinant of health.

A model of health adaptation incorporating multiple individual and environmental variables has been developed by Pender (1982; 1987) and includes polar constructs of health promotion and health protection. The domain of health protection includes individual behavior directed toward the regulation and maintenance of homeostasis and structural integrity. Health promotion is the actualization of inherent and acquired individual potential. Both health-protecting and health-promoting behaviors include physical, social, and self-care components.

Assumptions guiding Pender's model include concepts of personal choice and self-directed behavior. The assumption of personal suggests that change, self-actualization, or the capacity for change exists if the individual so chooses. A second assumption supposes that individual behavior is purposeful and motivated toward a goal. Purpose can only exist if choices are available and the individual is capable of making a choice. In a revision of this model, Pender has added a component of environmental modification that includes assessment and sociopolitical change. Environmental modification is considered along with personal change strategies for illness prevention and health promotion.

Another noticeable difference in the frameworks used to study women in nursing was the integration of the biological with psychosocial and cultural dimensions of health. New research about pregnancy (for example, early studies by Regina Lederman) focused on women's endocrine changes as well as the stressors in their lives. In addition, studies about premenstrual symptom and menopausal symptoms increasingly attempted to account not just for the role of ovarian hormones in symptoms but also to consider the context in which women lived their lives—the stressors and supports in their environments as well as stress arousal. Women with specific health problems such as irritable bowel syndrome (IBS) were studied in ways that allowed investigators to take into account ovarian steroids, stress arousal, and life stressors, and to identify that a history of sexual abuse was common in this group. Taylor (1996, 1999, 2000), building on the ecological health framework developed by Shaver and Pender, using a symptom management framework (UCSF Symptom Management Writing Group, 1995) as well as data from women's focus groups, developed and tested a symptom management package of nondrug strategies for perimenstrual symptom distress that has application to women's chronic illness management and general health promotion.

Including a view of the lifespan and development in the frameworks for studies has necessitated use of longitudinal designs in which women are studied over an extended period of time. This was the case in the studies of pregnancy and the postpartum done by Ramona Mercer, Marcia Killien, and Deborah Koniak-Griffin. Here the focus was on how women's health changed as a consequence of their changing biology during pregnancy and the postpartum as well as the changes that were ongoing in their lives, particularly the changes in the family relationships.

Continuing to focus on context for women's health has prompted nurses to include awareness of the social and physical environment in framing studies. Ethnicity and culture as well as education, occupation, and income become relevant parts of a framework for studying women when viewed from this vantage point (Meleis, Norbeck, & Laffrey, 1989). Racism, sexism, and classism have become part of the framework for understanding women's lives. Nursing's holistic perspectives have contributed to the advancement of innovative frameworks for new women's health services (Taylor & Woods, 1996) and also policy recommendations for women's health practice, education and research (Writing Group of the American Academy of Nursing Expert Panel on Women's Health, 1997).

Changing Methodology and Methods

In a review of women's health nursing research during the mid-1980s, Woods (1988) found that a empiricist paradigm predominated in research designs. The

majority of studies during this 7-year review (1980–1986) were correlational in design, with five experimental or quasi-experimental study designs. Holistic designs were incorporated into subsequent studies—hermeneutics to study menopausal hot flashes (Levine-Silverman, 1989) and women's experiences of menopause (Dickson, 1990); an ethnographic descriptive study of women and self-care in weight management (Allan, 1989); and a phenomenological approach to psychological health and inner strength in older women (Rose, 1990). Studies related to women, health, and nursing practice during the 1980s have addressed attitudinal correlates of health promotion or risk screening behaviors such as motivation performance of breast self-examination, weight management behaviors, correlates of exercise performance, images of health, health beliefs, roles, coping, and social support. Cross-cultural studies were limited, but included those of depression, life stressors, and health practices or beliefs in poor Black or immigrant women (Johnson, Cloyd, & Wer, 1982; O'Brien, 1982; Powers, 1982; Muecke, 1983; Oakley, 1986). In a thorough review of the nursing literature between 1980 and 1985, only 3% of the published research in women's health examined older women specifically (Woods, 1988).

In 1992, Woods reviewed the then new NIH research agenda on women's health and worried that our efforts would not contribute much to understanding fully the dimensions of women's health if they merely reproduced contemporary mainstream science. Simply adding a cohort of women to a study designed to illuminate health issues from the perspective of "male as the norm" would not solve the problems of understanding and explaining health as women experienced it. Woods urged a re-examination of the nature of science that would foster a more complete understanding of the diverse populations of women in the U.S. and serve emancipatory ends (Woods, 1992).

A recent review of nursing research by Taylor (Olesen, Taylor, Ruzek, & Clarke, 1998) indicated that, by the 1980s, nurse researchers had made significant contributions to investigating cultural differences in women's health, especially aimed at diversity issues (age, culture, race/ethnicity, immigrant women, homeless women, culture-specific illness conditions, and developmental transitions). Many of these studies provided conceptual models and clinical recommendations that encompass changes in how clinicians contribute to the social construction of gender, race, class, health, and illness (Caroline & Bernhard, 1994). A number of studies depict health and illness experiences among diverse women in a variety of circumstances, including diverse ethnic groups (Mexican American, Native American, African American, Southeast Asian and Haitian women) as well as health behaviors of vulnerable groups such as homeless women and low-income working women of color. Several nursing studies departed from merely investigating women's situations and

looked at women and their providers. Barriers to diverse women's access to health services have been studied from economic, psychological, and social perspectives by nurses. Nursing research on multiple diversities of women's health and illness has also applied multiple research methodologies and paradigms.

Since 1990, nursing research about women's health has expanded, both methodologically and substantively. Continuing to incorporate a holistic and biopsychosocial framework, nursing research has focused on multiple factors related to women's health and illness, in addition to women's lived experience. While empirical research has predominated in the study of women's health, nursing research has used a wide variety of qualitative and quantitative research methods. Descriptive and exploratory studies have used phenomenological, hermeneutical, or grounded-theory methodologies. Quantitative research designs have progressed well beyond the simplistic applying experimental, theory-testing approaches and participatory-action research designs to complex women's health conditions. Theoretical perspectives (feminist, political, social, or cultural theories) have provided critical foundations for these research endeavors.

The purposes of feminist science are to provide information *for* women rather than merely about women. As described in the review chapter by Andrist and Macpherson, there are now many nursing research programs that have generated explanations about women's health that are liberating, that have the capacity to be used by women for women's good. For example, we know that, regardless of the society, the most prevalent symptom during the postpartum is fatigue, among young adults and midlife women. We need to consider what context predisposes women to fatigue and what solutions or changes come about as a result of the research. Do the solutions really benefit most women? Or do they benefit the health care system?

Because concepts and methods shape our knowledge, they bear on the issues of diversity and commonality in women's health. In order to understand the complex realities of women's health in a wider social context, traditional epidemiological methods have been adapted to focus on health risks inherent to women's daily lives. Instead of identifying diseases and then searching for a cause, some nurse researchers have used both qualitative and quantitative methods to explain women's health risks within the context of their work, family and/or culture (Taylor, Woods, Lentz, Mitchell, & Lee, 1991; Woods & Mitchell, 1997).

Regardless of the difficulties inherent in both qualitative and quantitative research methods for investigation of differences originating from women's diverse contexts, new and developing methods have advanced our understanding. In quantitative research, when little is known about intra-individual vari-

ability of any particular phenomena, such as pain, fatigue, or perimenstrual symptom experience in different ethnic groups, a time-series methodology can answer questions of individual experience yet approximate the internal validity of experimental designs (Taylor, 1990). In addition, structural equation or hierarchical linear modeling strategies that better reflect the complexity of the dimensions compared with simple linear analytic models can analyze multiple indicators of diversity (ethnicity, race, occupation, income, class, education, etc.) as well as build and test complex theoretical models using multidimensional and longitudinal data that represent both the individual woman and her environment (social, political, cultural variables) (Taylor, Woods, et al., 1991). Further, some researchers have applied hybrid or triangulated designs (Mitchell, 1990) where both quantitative and qualitative methods are used in the investigation of women's diverse experiences. In qualitative research, advances in narrative and phenomenological analysis can facilitate deeper exploration of the meaning of women's diverse experiences (Bell, 1994; Stevens, Hall, & Meleis, 1992).

Realization that we, as researchers, are situated knowers means that we can have only a partial perspective of a problem based on our position. Only through multiple perspectives can multiple truths inform a topic. The need for a more complete understanding implies that investigators need to seek multiple perspectives in constructing their studies. Indeed, we collaborate with women in designing the projects, even at the point of selecting the important questions to study (Harraway, 1989). Regarding women as legitimate sources of knowledge means that women are valid informants on their own lives and health. Women's subjective perceptions are taken as valid, and the women are regarded as experts on their own lives. Who can tell us about symptoms other than the person experiencing them?

Notable in the review of nursing research literature of women's health are the articles of clinical recommendations. One of the unrecognized yet valuable types of nursing research is the report found in the clinical literature. Though not reported as case studies, which are in the style of medical journals, clinical reports nevertheless contain rich details about health care for diverse women (women of color, lesbian and bi-sexual women, women with disabilities, and women across the life span, such as young, middle-aged, and older women).

Because knowledge generation has the goal of benefiting participants, the participants have a stake in interpreting the findings. Many of us have consistently invited women who participated in our studies to have an opportunity to help interpret the results. Reflexivity involves looking at oneself as the researcher, examining one's own positions and values relative to the participants in a study (Reinharz, 1987). This is difficult. We as investigators

need to examine our own biases at each point in the study, considering how they may have influenced our interpretations. We need to be willing to consider if the data analysis used women's experiences as the test of the adequacy of the problems, concepts, hypotheses, research design, data collection, and interpretation. We need to be honest about whether the research was done *for* women or for men and the institutions they control. We need to worry about whether we can place ourselves in the same class, race, culture, and gender sensitive critical plane as the women we study.

Other areas where nursing has contributed to changing methods and knowledge generation for women's health include the integration of public, political, scientific, and historical perspectives. We have dared to study how the society can make women sick. For example, interventions directed at individuals to change their health rather than community or population-oriented public health approaches negate the role of society in producing poor health and locate the responsibility for health only within the individual (Flynn, 1994).

Generating and Expanding New Knowledge for Women's Health

In this volume on nursing research in selected areas of women's health, we were challenged to be able to include all of the research conducted by nurses. Clearly, nurse researchers in the aggregate have contributed to women's health research. We have provided the leadership in many areas. We could have filled two volumes with reviews of nursing's contributions to generating and expanding women's health knowledge. In the following sections, we will describe the reviews included in this volume and highlight those areas that were not included which need further attention or have been reviewed elsewhere.

Nursing scholarship in women's health has expanded the knowledge of women's health and illness and also generated new knowledge across biopsychosocial and cultural domains. Most importantly, nurse researchers have included women in studies that generate information about health issues that matter to women; inform practice for a diverse groups of women, address differences in ethnic, racial, socioeconomic, sexual orientation groups; and have significant consequences for advancing the health of all women in the world. In choosing particular topics, we hoped to show the breadth and depth of research and scholarship by nurses that spans women's bodies and biology (menstrual cycle research), women's multiple roles (parenting, employment and caregiving), women's diversity (lesbian health and immigrant women's health), and cross-cutting and emerging areas of women's health and illness issues (violence, fatigue, stress, and health care decision-making).

Now, in 2001, 13 years after nursing research on women's health was reviewed in one chapter of the *Annual Review of Nursing Research* (Woods,

1988), we have one whole volume dedicated to women's health research conducted by nurses, and we struggled to delimit the topics for review due to the extensive contributions by nursing scholars. Building on previous reviews as well as emphasizing nursing's leadership in extending the knowledge base in women's health, 11 topical areas were selected. Topics were considered for inclusion that demonstrated some of the areas where nursing has provided leadership or demonstrated a significant contribution of research and scholarship. The following areas of new or expanding women's health knowledge generated by nurse researchers are included in this volume:

- Women's multiple roles, including parenting (Angela McBride & Cheryl Prohaska Shore), employment (Marcia Killien), and caregiving (Margaret Bull)
- Disparities in health, including differences among ethnic and social groups of women affecting their chances for health, such as lesbian health (Linda Bernhard) and immigrant women's health (Karen Aroian)
- Menstrual cycle research—a focus on Nursing's contributions (Nancy Reame and Cheryl Andrist)
- Stress and women's health and illness (Cheryl Cahill)
- Fatigue and sleep alterations affecting women's health and illness (Kathryn Lee)
- Violence against women and health care directed at assessing and caring for women who have survived male partner violence (Janice Humphreys)
- Women's health care decision-making (Marilyn Rothert and Annette O'Connor)

Some of the areas of significant contribution by nurse researchers that are not reviewed in this volume include reproductive health issues (fertility protection and prevention, menstruation, childbearing, and sexuality), women's mental health, women's health problems related to aging (incontinence and falls prevention), and comprehensive reviews of women's health disparities and diversity, symptoms and symptom management research (pain, dyspnea, altered mobility). The following areas of women's health knowledge have been reviewed by nurse researchers in recent publications.

- Sexuality (reviewed by Linda Bernhard, 1993; Catherine Fogel, 1999) and fertility protection and contraception (reviewed by Theresa McDonald & Susan Johnson, 1993)
- Menstrual cycle research (reviewed by Alice Dan, 1988; Nancy Woods, Ellen Mitchell & Diana Taylor, 1999)

- Childbearing and women's health (reviewed by Kathryn Barnard & Margo Neal, 1977; Marlene Mackey & Susan Brouse, 1988; Patricia Geary and associates, 1993)
- Infertility and women's responses to infertility diagnosis and therapy (reviewed by Ellen Olshansky, 1999)
- Disparities and diversities in women's health (reviewed by Virginia Oleson and Diana Taylor, 1997)
- Women's mental health and illness (reviewed by Denise Webster, 1988; 1993) and substance use and abuse in women (reviewed by Tonda Hughes, 1989; 1993)
- Problems of aging and older women's health, including mental health status, functional limitations, osteoporosis, managing incontinence, and supportive and non-supportive environments (reviewed by Bev McElmurry & Emily Zabrocki, 1988, 1990; Pat Archbold, 1999; Beverly Roberts, 1999; Linda Phillips & Martha Ayres, 1999; Cornelia Beck, Diane Cronin-Stubbs, Kathleen Buckwalter & Carla Rapp, 1999; Molly Dougherty & Linda Jensen, 1999)
- Problems of gender-specific diseases and physical health, such as autoimmunity and Lupus Erythematosus (reviewed by Ayhan Aytekin Lash, 1997), the management of hypertension in women (reviewed by Lynne Braun, Beth Staffileno, and Kathleen Potempa, 1997), women's cardiovascular health (reviewed by Karyn Holm and Sue Penckofer, 1993), sexually transmitted diseases (reviewed by Catherine Fogel, 1993), women and cancer (reviewed by Tish Knobf, 1989), and osteoporosis (reviewed by Amy Clarke Olson, 1989)
- Symptom management research, such as pain, dyspnea, altered mobility, and nausea and vomiting (reviewed by Christine Miaskowski, 1997; Barbara Smith & Mary Macvicar, 1999; Ginger Carrieri-Kohlman & Susan Janson, 1999; and Peg Heitkemper, 1999)
- Occupational issues, such as women as health care providers (reviewed by Carol Leppa, 1988), violence against health care workers (reviewed by Carol Collins, 1997), and sexual harassment (reviewed by Judith Ross, 1997)

SUMMARY

The science of women's health, as shaped by nurse researchers, grew from the redefinition of women's health to proposing new conceptual frameworks for studying women, development of methodology and methods for studying women's health, and to the generation of new knowledge about several aspects

of women's health. Clearly, a community of nursing scholars developed over the past 25 years has contributed to advancing women's health knowledge and improving the health and well-being of women. In subsequent reviews, the adequacy of women's health research in nursing will be demonstrated by future research that: includes women in studies that generate information about health issues that matter to women; informs practice for a diverse groups of women, addressing differences in ethnic, racial, socioeconomic, sexual orientation groups; and has significant consequences for advancing the health of all women in the world.

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