FOCUS ON YALE MEDICINE

Mindfulness-Based Stress Reduction at the Yale School of Nursing

Beth Roth

Yale University School of Nursing, New Haven, Connecticut

INTRODUCTION

It is 10:00 Friday morning at the Yale School of Nursing in New Haven, Connecticut. I greet students as they arrive for the fifth session of an elective course entitled "The Stress Reduction and Relaxation Program." This eight week program provides intensive training in mindfulness meditation, and introduces meditation as a therapeutic intervention in the health care system.

There are 20 students in the class. As I watch them take their seats in the circle, I reflect upon their backgrounds and their reasons for enrolling in this course. Michele, a midwifery student, has lost a brother to AIDS. Susan, a physician associate student, has chronic back pain after multiple surgeries and wears a back brace most of the time. Karl, a doctoral student in public health, is conducting research on HIV-infected women in a nearby prison. Madeline, a divinity student, works part-time at hospice. Amy, a family nurse practitioner student, is balancing full-time studies with a part-time job, and raising two young children. Rebecca, a medical student, has wanted to learn meditation for many years and saw this course as an opportunity to begin his practice. Everyone in the group comes with a dual purpose: a personal desire to learn meditation, and a professional interest to apply meditation in their clinical work.

More than 200 graduate and professional students have completed the course since I first taught it in the fall of 1993. Approximately half are nursing students from a variety of specialties, including family, pediatric, geriatric, and psychiatric nurse practitioner; nursing policy and management; nurse midwifery; graduate entry program in nursing; doctoral studies in nursing; and clinical nurse specialist. The rest of the students are from other graduate and professional programs at Yale, including business, divinity, epidemiology and public health, forestry, medicine, physician associate, neurobiology, neuroscience, and psychology. They are an international group, from Argentina, Canada, China, Germany, Guyana, India, Italy, Japan, Kenya, Korea, Malaysia, Poland, Spain, the United States, Vietnam and Yugoslavia. With these enthusiastic and motivated students, I share what I have
learned in the many years of my own meditation practice. I also describe the bilingual mindfulness meditation program that I established at the Community Health Center in Meriden, where I worked as a Family Nurse Practitioner.

The content and activities of the Yale course are nearly identical to those of the eight-week program that I taught for six years to inner city patients at the Community Health Center. Both of these programs are modeled on the Stress Reduction Clinic founded in 1979 by Jon Kabat-Zinn Ph.D., at the University of Massachusetts Medical Center in Worcester, Massachusetts.

The primary goal of the Stress Reduction and Relaxation Program is to provide students with instruction and support to establish a daily meditation practice, in order to help them cope more effectively with stress. This is an experiential program, requiring a sincere commitment of time and energy. Students are asked to attend all of the two-hour class sessions, participate in an all day silent retreat on a weekend, and devote 30 to 45 minutes per day, six days per week, to practicing at home with cassette tapes the meditation techniques learned in class. Among the writing assignments are a weekly journal entry about their meditation practice, and a book review of the required text Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness by Jon Kabat-Zinn.4

THE CURRICULUM: CLASS ONE

In the first class, the students introduce themselves, stating their program of study at Yale, and their reasons for taking the meditation course. I present the philosophy of the mindfulness-based stress reduction program: every individual has vast inner resources which can be mobilized through meditation practice. Once identified and strengthened, these resources can assist people in their healing. The program is an educational intervention; it is not a medical treatment nor a mental health therapy. No matter what may be “wrong” with a person — a medical illness, a mental health problem, or personal stress — for as long as that person is alive, there is still much that is “right.” The mindfulness meditation program helps people to focus on what is right and healthy, rather than on their diagnosis or what is wrong with them. Attention to what is right and healthy does not deny, avoid, or ignore what might be wrong. Rather, by focusing on and strengthening what is healthy, one is able to return to what is wrong with renewed energy, new insights, and a fresh perspective. Thus, one is able to cope more effectively with stress, pain, illness, and other difficulties of life.

After this introduction, we do an eating meditation. The purpose of this exercise is to dispel the common belief that meditation is a mysterious or foreign activity. Rather, meditation is simply paying attention, fully experiencing what one is doing in the present moment. Students carefully examine one raisin in the palm of their hand, reflecting on its physical appearance and characteristics, as well as its history growing as a grape on the vine, nourished by the sun, rain and soil, and later picked, packaged, shipped and sold in the store. Next the students slowly eat the raisin, focusing on sensations of tasting, chewing, and swallowing.

By doing this simple exercise, students immediately experience how difficult it is to focus on just one thing. The attention jumps all around; the mind is full. In the few minutes spent eating the raisin, many thoughts arise in the mind.

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4 Reprinted with permission from an earlier article by this author from The Nurse Practitioner Journal 20(6), 1995.
Some may be entirely unrelated to the raisin, while others are opinions and commentaries related to the experience of eating the raisin. Yet even one moment of concentration yields powerful results. Students comment that in daily life they rarely taste their food as completely as they tasted the one raisin. They quickly realize that if we can "miss" the taste of our food because the mind is habitually busy thinking while we are eating, then we can "miss" many other moments of our life. These individual moments add up to many hours, days, weeks, and even decades, as we perform so many activities on automatic pilot. It is not that we want to miss experiencing our lives fully. It's just that we are often unable to give our full attention to what we are doing because the mind does not know how. It is not trained to focus, to carefully observe, and to concentrate.

After the eating meditation, we do a 30-minute body scan meditation, lying on foam pads or blankets on the floor. The body scan is not done for the purpose of relaxation, although many people do find it relaxing. The purpose is to focus and concentrate the mind by using the body as the object of attention. Beginning with the feet and ending with the face and head, we carefully bring attention to physical sensations in each body part. As we attempt to focus our attention on sensations that might be present in any given moment in the foot, arm, back, or other body part, we discover that the attention repeatedly wanders. Each time we find ourselves lost in thought and no longer aware of the meditation, we bring ourselves back, focusing the attention once again on physical sensation in the body.

In addition to developing concentration, the body scan teaches us to perceive the myriad of physical sensations that occur throughout the body all day long. In daily life, unless we are experiencing significant physical discomfort or obvious physical pleasure, we generally do not notice sensation in the body. Yet, just as we can sit quietly by the side of a river and simply observe each ripple of current that occurs, each twig or leaf that floats by, each insect that lands or fish that jumps, each shadow of a cloud or reflection of the sun, so too can we become aware of the nearly uninterrupted stream of physical sensation in the body. Doing this exercise for just a few minutes reveals a steady stream of individual sensations arising and passing away in each successive moment: an itch in our left foot, our hair touching the back of our neck, warmth and moisture in the mouth, the air touching the skin of our face or hands, clothing against our calf muscle, discomfort in our knee, a tingle in our elbow, perhaps a moment without noticeable sensation, and then the process continues. Awareness of the body moment-by-moment at this level of physical sensation enables us to know ourselves in new and different ways. In contrast to the mind, which interprets our experiences in accordance with our opinions, preferences, and habits, the body offers us clear, reliable, and present moment information. The skill of accurately perceiving physical sensation often leads to greater self-knowledge, self-trust and self-confidence.

The ability to direct one's attention to the body gives us valuable information about how we react to stress and helps us to more consciously modulate our responses. During stressful moments we tend to habitually tighten muscles in the body, thereby increasing our tension and stress. Yet in the moment we realize we are clenching our jaw in an argument, or gripping the steering wheel in a traffic jam, the natural response is to release and soften the muscles, thereby providing immediate relief from the stress.

For people living with chronic physical pain, the skills developed by the body scan allow pain to be perceived and managed in new ways. Instead of experiencing physical pain as a fixed and solid entity, it
is experienced as an ever-changing flow of physical sensation. Carefully observing a painful area of the body, we notice a moment of burning followed by a moment of pressure, then tingling, next stretching, then a moment without sensation, then coldness, twisting, contraction, etc. In the painful area, there are actually moments when painful sensations are not present. With mindfulness of sensation, these moments of comfort and relief can be recognized and appreciated. And as one becomes aware of sensations throughout the body, areas not affected by chronic pain become more alive and integrated. We begin to reconnect and re-include all parts of the body in our perception and definition of our physical self.

Mindfulness practice also helps us to distinguish physical pain from the mental and emotional reactions to the pain. We begin to notice the tendency of the mind to react immediately to the presence of physical pain by creating a train of fearful thoughts about the pain. We might think, “This pain will last forever,” “I may need surgery,” “My condition has worsened,” or “How will I manage next year?” These mental activities distort the physical pain and cause muscle tension, which further aggravates the pain. Fear, anger, anxiety, aggression, hatred, self-pity, self-blame, and frustration are some of the reactions which exacerbate physical pain with mental torment. Through mindfulness meditation, one’s perception of the pain, as well as one’s relationship to the pain, begin to shift. For Yale students who themselves experience chronic pain, and for those whose professional or clinical work involves helping people with chronic pain, the meditation practice quickly offers valuable realizations.

At the end of the first class session, I distribute the first cassette tape and assign the home practice of doing the body scan once daily, and of beginning the weekly journal writing.

CLASS TWO

In the second week of class we divide into small groups to discuss what it was like trying to find time for home practice. In every class there are some students who did the body scan daily, some who did it a few times, and others who did not do it at all. We talk about the time constraints, obstacles, and habits that interfere with our ability to incorporate meditation practice into daily life. It becomes obvious that we will never magically “find” time for meditation, but that we must actively make the time, which almost always means deciding not to do something else. Students often see patients in clinical settings labeled “non-compliant” when they fail to adhere to behavioral or lifestyle changes recommended by their health care provider. It can be surprising and humbling for students to experience non-compliance in a different way, coming face-to-face with the very personal challenge of changing habits and priorities, in order to make time for oneself in one’s own life.

After another body scan, we begin the awareness of breathing practice. Known as sitting meditation or breathing meditation, this practice is introduced with a ten minute “sitting.” Sitting in a circle in chairs or on cushions on the floor, we start to train our attention to focus on the physical sensations of breathing. The goal is not to think about breathing, nor to attempt to change or control the breathing in any way. We simply experience as carefully as possible the physical sensations of breathing: the flow of air in and out of the nostrils, or the movements of the chest or abdomen with each inhalation and exhalation.

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Each week we increase the duration of practice until the last class when we meditate together in silence like this for 30 or 40 minutes.

The awareness of breathing practice is extremely simple, but not easy. It comes from an ancient Asian Buddhist tradition, yet its practice requires no particular religious orientation or belief system. Any attempt to sustain one’s focus on breathing, whether by the novice or the experienced meditator, will result in the mind wandering. This wandering may be constant at first, and somewhat less frequent as one becomes more skilled at meditation. Each time the mind wanders into past memories or regrets, future plans, worries or fantasies, we gently return our attention to the breath. We become aware of what the mind is doing throughout our lives, often unbeknownst to us. Because the mind spends much of its time preoccupied with past events or future plans, we rarely are able to experience life as it is happening in the present moment. With practice, the process of observing the breath, one breath at a time, enables us to engage with life one moment at a time. By repeatedly letting go of thinking to return to the breath, we learn to distinguish the process of thinking from the content of our thoughts. As we become less identified with our thoughts we open to a more expansive sense of self. Whether subtle or startling, the insights and shifts in awareness experienced during breathing meditation can profoundly change our life.

The breath is the primary object of attention because it is always present, always changing, and is the link between the body and the mind. Through attention to the breath, one cultivates the skill of mindfulness, of carefully paying attention. This skill is equally applicable to breathing as to eating, walking, speaking, listening, taking an exam, making love, chopping vegetables, setting the table, washing the dishes, taking out the garbage, driving a car, waiting on line, or any other activity of daily life. Mindfulness is deeply experiencing one’s life as it unfolds in the present moment. To understand this more directly, students choose one routine daily activity to do as mindfully as possible once during the week. Whether folding laundry, brushing their teeth, eating an orange, or petting the dog, they are to perform the activity at a slightly slower than normal pace, do just the one thing, and pay very close attention. I explain that being aware of the breath or body sensations during the activity will help strengthen their mindfulness. In addition to this assignment they are to do the body scan and ten minutes of breathing practice daily.

CLASS THREE

In the third week I introduce a series of hatha yoga postures done lying on the floor. These gentle stretches of the back, neck, and extremities are done slowly and consciously, with awareness of body sensations and breathing. When done in this way, the yoga practice is a form of mindfulness meditation. Students often discover through the yoga practice not only greater physical flexibility but also a corresponding increase of mental and emotional flexibility in daily life. For example, one of the first observations gained from the yoga is that we breathe freely when we are doing a simple pose or movement, and tend to hold our breath when the yoga posture is even slightly challenging. Yet holding the breath is of no benefit, as it creates more tension and contraction. Consciously releasing the breath and continuing to breathe normally actually helps to perform or maintain the yoga posture. This is directly relevant to daily life, when we tend to hold our breath during moments of stress, difficulty, or conflict, despite the fact that doing so only exacerbates our distress. Conceptualizing this may be simple,
but actually becoming aware of momentary breath-holding in daily life is what enables us to change this destructive habit. Students begin to notice their breath-holding habits, whether in a traffic jam, facing a difficulty with a preceptor or a patient in a clinical setting, taking an exam, or perceiving their own doubts and self-criticism. In the instant that the breath-holding is noticed, there is a simultaneous release, and the breath flows freely once again. This is a small but important example of how mindfulness meditation practice helps us make conscious choices to improve our health and well-being. This example also demonstrates the link between formal practice, which is the time one devotes to practicing meditation, and informal practice, which is the application of mindfulness in everyday life. Over time, formal and informal practice compliment and support each other, working together to enable greater continuity of mindfulness in meditation practice and in daily life.

Beginning the third week the home practice is to alternate daily the body scan with the yoga, which is on side two of the tape, and to continue the breathing meditation.

**CLASS FOUR**

In the fourth class we again do the yoga practice. Students then divide into small groups to generate lists of sources of stress in daily life. As we read these lists it becomes apparent that the vast majority of situations we identify as stressful are events which happen frequently and repeatedly in daily life. Despite years of experience, we have not developed effective strategies for managing these events with balance and equilibrium. We spend our time and energy trying to change and control what is essentially uncontrollable: other people, events, and circumstances. Most of us spend far less time and effort attempting to change what is actually possible to change, namely, our own responses to the events and circumstances of our lives.

The theme of discussion in the fourth class session is the difference between reacting to stress and responding to stress, and how to gradually move from stress reactivity to stress response. Reaction implies habit and a lack of perceived options as to what to do in the very moment that the stressful event is happening. To respond to stress means cultivating greater mindfulness and a more spacious awareness. It means perceiving various options as to what to do or say, and making conscious decisions and choices while the stressful event is unfolding. Awareness of body sensations and of the breath, skills developed in meditation practice, become resources to help students make conscious choices during stressful situations. An understanding of cause and effect is useful as well: habitual reactions to stress damage our well-being, while conscious and creative responses enhance our well-being. This insight, gained through direct personal experience, provides both motivation and faith in the meditation practices and in our ability to change.

**CLASS FIVE**

In the fifth class, I teach walking meditation. Students walk silently at a slow pace, either in a large circle or back and forth in individual “lanes,” focusing attention on physical sensations that occur in the body during walking. These include the sensation of contact or pressure between the sole of the foot and the floor, the feeling of movement and flexion in the ankles or knees, or whatever sensation of walking is most predominant to the individual. As the mind inevitably wanders and one’s attention is carried away in thought, attention is repeatedly brought back to the sensations of walking. In everyday life, walking is usually goal ori-
resented, for the purpose of accomplishing a task or arriving at a destination. The mind is often lost in thoughts of the past or the future while the body is engaged in movement. There may be little awareness of what is happening in the present moment, which is the myriad of physical sensations that comprise the act of walking. In walking meditation, there is nothing to accomplish and no destination. The only goal is to experience the moment-by-moment process of the body in motion. This skill is directly transferable to daily life, where the body is often engaged in activities that are carried out while standing or walking.\(^6\)

After learning walking meditation, students often report how easily they are able to incorporate mindfulness of walking into daily life. Whether for just a few steps in a hospital hallway, or for longer periods in a city park, there is an immediately noticeable effect: the focusing of attention, a return to the present moment, and a generalized calming of one's body and mind.

After the first introduction to walking meditation, I ask each student to briefly describe their experience. They are to distinguish between direct experience and opinion or mental commentary. Examples of direct experience might be, “I was very aware of my balance” or “I felt my weight shifting from the heel of my foot towards the toes.” Examples of opinion or commentary are “I really liked walking meditation” or “I found it very boring.” Separating opinion from actual experience can be quite challenging. The purpose of doing so is not to denigrate or diminish the value of opinion. Rather, it is to demonstrate how our opinions and judgments often mask our direct experience. Extensive mental commentary can even masquerade as actual experience. For home practice that week, I encourage the students to stop what they are doing in any moment and answer for themselves the following two questions: “What is my direct experience in this moment?” “What is my opinion, judgment, or commentary?” Practicing this exercise just once or twice daily can help us perceive our experiences with greater clarity. We also begin to recognize our opinions and judgments for what they actually are: thoughts that arise in the mind. Seeing opinions and judgments in this way allows us greater freedom to choose how to respond to them.

**CLASSES SIX TO EIGHT**

As the course continues, class activities and home practice include the body scan, breathing meditation, yoga postures done lying on the floor, walking meditation, and standing yoga. The second cassette tape has guided meditation with focus of awareness on breathing, 15 minutes on one side and 30 minutes on the other. Small and large group discussions focus on the application of meditation practice to everyday life. There are activities designed to enhance awareness of interpersonal communication, to replace automatic reactions to stressful situations with consciously chosen responses, and to bring mindfulness to impatience, anger, and other strong emotions. We discuss how meditation practice helps us to live each moment more fully and more vividly, and to remove the veil of opinions and judgments which often cloud our ability to directly experience our lives.\(^a\)

Towards the end of the eight-week course we discuss the relationship between mindfulness practice, the individual, and the world. Many students embark on meditation practice with the assumption that because meditation is a solitary activity, it is somehow selfish or self-indulgent, a way to remove oneself from the world. It is true that meditation, whether practiced individually or in a group, is an internal process. However, rather than promoting isolation from others, meditation can strengthen one’s connection to other peo-
COMMENTS FROM STUDENTS

"This class has been excellent. Thank you very much for somehow transforming our windowless, dull, drab and sometimes depressing classroom into a peaceful, inspiring and sacred space. This class has been challenging and rewarding. It has helped me crack open many doors, not just in my own spiritual and emotional growth, but also in a professional way. I feel like my vision of health and wellness has been expanded: health is a dynamic process, always changing and always encompassing ease with disease. I am not sure that I can communicate how grateful I am that you teach this class at YSN, and how grateful I am that I decided to take the class. I guess I will just say THANK YOU and hope that you know how helpful and healing it was for me."

"I feel stronger and more alive as a result of the meditation practices. My stress is reduced, I'm a better listener, life is richer and more exciting, and I've realized that my day must start with meditation if I am to achieve peace. I think back to when I began the class and am astonished and pleased to see how different I am. It's as if meditation has made me more aware of my authentic self. I feel alive and happy."

"What I've learned will be of use in helping me to work with the emotional stresses of the provider/client relationship - in finding space to understand my own reactions to those stresses."

"Meditation practice has helped me to have more compassion with my patients, to be less judgmental and more patient, to have better relations with my co-workers. I'm more willing to pitch in and help, I'm a better team member at work."

"Learning mindfulness meditation has deepened my understanding of myself and as a result, my understanding of others. It has contributed to my ability to relate to patients' spirituality, and to relate to patients in their pain as part of human experience which I share, even though I have been so fortunate in my life."

"Many aspects of my life I see with new eyes. My tennis game has improved, my willingness to see the sacred in everything, and my openness to others. More than anywhere else I am called to be authentic with those that I serve in clinical practice."

"Meditation has increased my sense of self and my ability to be strong in my convictions. I learned to take more pride in taking care of myself. I think meditation will help me to be more present with patients, and I hope I will be able to meditate for at least a few minutes each day on the wards to ease the stress of internship."

I have learned much more about myself in this class than I ever imagined was possible. I understand my fears, hopes and self much more. I will be a better Nurse Practitioner because of this class. What an asset to YSN that this course is offered."

ple and to the world. Mindfulness meditation practice can help us to be more present and compassionate, first in our relationship to ourselves, and then in our relationships with others, including family, friends, patients, clients, and colleagues. After spending just six or seven weeks learning meditation, students are aware that three separate experiences occur repeatedly during meditation practice. First, there are moments when our attention is focused on the sensations of breathing. In these moments, we are cultivating concentration and patience, one moment at a time. Second, there are moments when the attention wanders. We find that we are
no longer aware of the breath but are engaged in thinking. In these moments, we learn about the mind’s habits and activities, and thus develop a greater understanding of our own mind. Since all human minds function the same way, a greater understanding of the habits and workings of one’s own mind enables a greater understanding of human beings in general. Third, there are moments when we consciously bring our attention back to the breath. Each time we return to the breath, we attempt to do so in a very particular way. Rather than exercising judgment or self-criticism for having become distracted, we simply take delight in connecting once again with the breath. We extend an invitation to ourselves, “roll out the red carpet,” and gently come back to the breath. In doing this, we practice one of the finest arts of meditation: the ability to begin again in any moment. We cultivate kindness and compassion towards ourselves. As we practice treating ourselves with greater kindness while we are meditating, we begin to notice moments in everyday life when we are treating ourselves in unkind and critical ways. Gradually, we are able to change moments of self-criticism and harsh self-judgment to moments of kindness and compassion towards ourselves. As we are increasingly able to treat ourselves with kindness and compassion, we find it easier and more natural to extend these same states of mind and heart to others. We bring into the world, through our very being, the qualities we develop through mindfulness meditation practice. Thus, the practice benefits not only the individual doing it, but also a world so desperately in need of greater understanding, kindness, and compassion. This discovery is often a turning point for graduate students, many of whom have chosen professional careers through which they hope to contribute to the healing of our world.

Many students who complete the mindfulness-based meditation program are enthusiastic about sharing what they have learned with others. Some have introduced specific ideas or activities learned in the meditation program to friends or family members, or to patients or colleagues in their clinical settings. While I support these efforts, I also clearly state that the program is not designed to train students to teach mindfulness meditation. I firmly believe that maintaining a daily meditation practice for some years is a pre-requisite for teaching meditation to others. In a health care setting, meditation cannot be prescribed to a patient like a medicine, and it cannot be suggested like a dietary change or exercise regimen. Patients must be taught how to meditate, and helped to discover the ways in which meditation practice can improve not only their health but also their happiness and the quality of their life. This is a gradual process which develops over time, facilitated by the personal experience and the teaching skill of the instructor. For these reasons, I encourage students to make the long-term development of their meditation practice a priority if they hope to teach meditation to others in their professional work.

STUDENTS’ RESEARCH

As an outgrowth of this course, Yale students have met their master’s and doctoral research requirements by investigating various aspects of mindfulness meditation. A family nurse practitioner’s master’s thesis analyzed pre-and post-intervention data from patients who completed the mindfulness-based stress reduction program at the Community Health Center of Meriden. She found significant improvements in medical and psychologic symptoms, and self-esteem, among program completers. At the same site, another family nurse practitioner student examined health care utilization patterns of patients
who completed the meditation program. Through medical chart review he compared the number and diagnoses of patients’ health center visits during the year prior to entry and the year following completion of the mindfulness-based stress reduction program. He found a statistically significant decrease in chronic care visits for Spanish-speaking patients following completion of the program. Also at the Meriden site, another family nurse practitioner student analyzed pre- and post-intervention general health and quality of life data of patients, and found significant improvements among patient graduates of the mindfulness-based stress reduction program. A pediatric nurse practitioner student evaluated a meditation course taught as an after-school program for pregnant and parenting teenagers. She documented interest, acceptance, and relevance of the meditation practices among the teenagers in the study. A psychology student conducted a series of experiments on the effect of meditation on cognition for her Ph.D. dissertation. She found that engaging in meditation can decrease habitual patterns of thought. These research projects have enabled students to expand their interest and understanding of mindfulness meditation beyond their personal experience, and make significant contributions to the growing body of research on mindfulness meditation.

CONCLUSION

The Yale graduate students who have taken this course have inspired me in many ways. Their enthusiasm, intelligence, and open-mindedness have been extraordinary. The sincerity of their commitment to meditation practice helps me renew my dedication to my own practice and strengthens my commitment to teach meditation to others. Their support for the integration of mindfulness meditation and other nonconventional practices into our nation’s health care system gives me faith that behavioral and lifestyle treatment modalities will continue to grow. It is a source of great personal and professional satisfaction to have this opportunity to teach mindfulness-based stress reduction at the Yale School of Nursing, and for this I continue to be grateful.