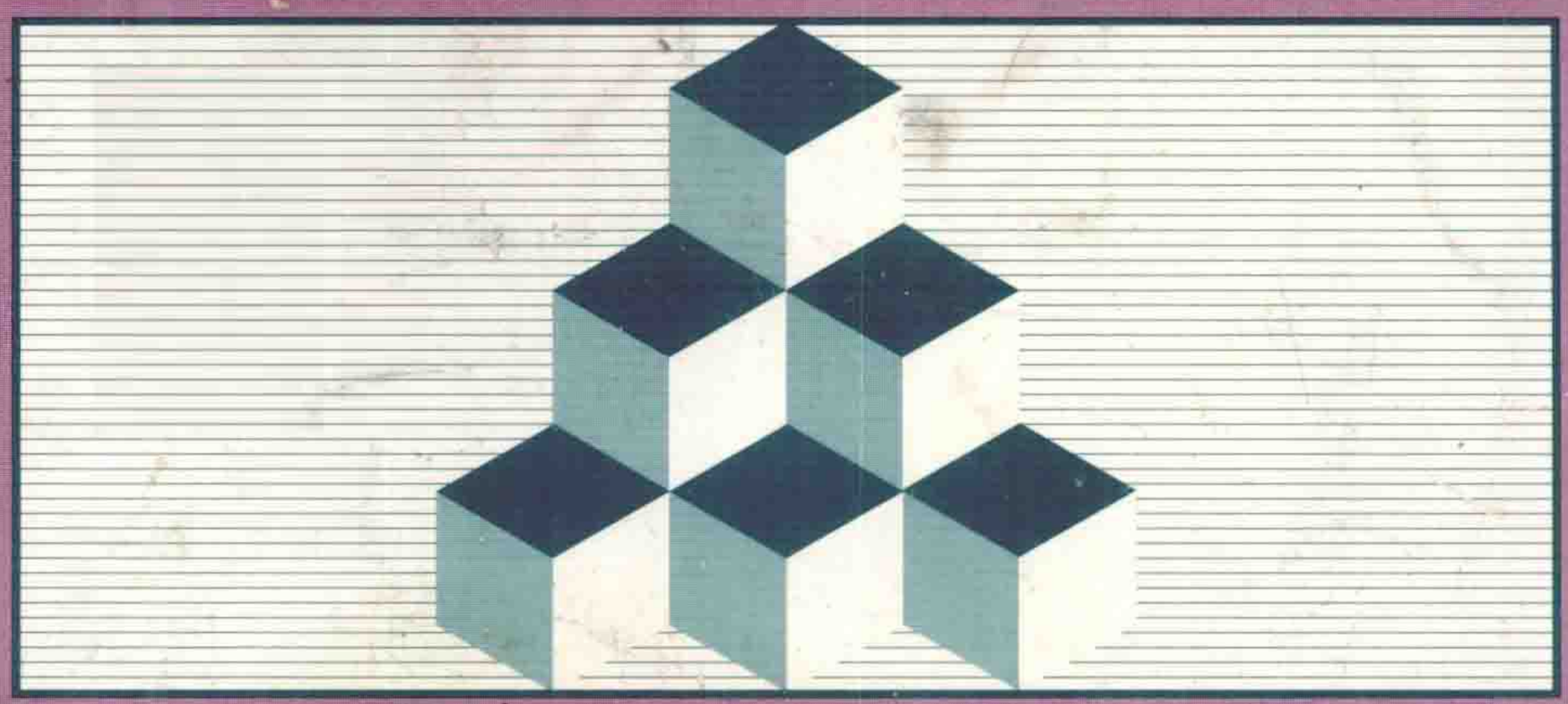
PRINCIPLES of HEALTH EDUCATION & HEALTH PROMOTION



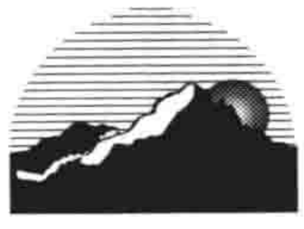
J. Thomas Butler

SECOND EDITION

Principles of Health Education and Health Promotion

2nd Edition

J. Thomas Butler
Delaware State University



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Preface

This text is a guide to the fields of health education and health promotion. Its primary beneficiaries are students who are preparing for careers as health educators or health promoters. In this second edition, the chapters are rearranged somewhat, with new sections reflecting users' suggestions.

The discipline of health education and the profession of health educator have evolved as a result of a number of forces, in many ways the same influences that affect our health and our perception of it. When entering the profession, the health educator should be aware of the many factors that influence our health: heredity, environment, health care services, and our own behavior.

This edition has less historical detail relating to health and the ancient times and more emphasis on the changes that have brought us to the current status of health promotion and health education. The early chapters establish the relationship of health education and promotion to other disciplines and to health as a condition. This is done in pragmatic, philosophical, and historical contexts, with an emphasis upon the uniqueness of health education as a discipline.

Chapters 8, 9, and 10 present justifications for programs in various settings, examples of successful programs in a variety of milieus, and a thorough discussion of comprehensive school health education. More examples of thriving programs are included. The comprehensive school health program is presented in the context of an eight-component model. The National Health Education Standards published in 1995 are discussed, and included in an appendix.

The product of a successful health education/promotion endeavor is generally the development of behaviors conducive to well-being or a change in behaviors to those conducive to health. It follows that the health educator must have a theoretical base from which to work. Three models of human development are presented in Chapter 5. Chapter 6 offers several theories of learning and human behavior with applications to health education. Some of these did not appear in the first edition.

The competencies and skills of health educators are addressed in Chapters 11, 12, and 13. These competencies follow, to some extent, the Responsibilities and Competencies for Entry-Level Health Educators originally identified by the Role Delineation Project.

New to this edition is a chapter on ethics in health education. Various ethical issues and principles are presented, along with the functions of codes of ethics. Two codes are discussed and are presented as appendices.

Chapter 4 is devoted to issues identified as priorities for health, including health education. It relates the recent history leading up to and including the Year 2000

Objectives for the nation, especially those directed toward improving the health of young people. New to this edition is a discussion of the Midcourse Review of the Year 2000 Objectives.

Finally, we look at current and future issues that may affect the way health educators perform. Some of these issues, such as those surrounding credentialing, accreditation, and professional preparation, affect health educators in the present. Others, such as vendorship and greater entrepreneurship in the profession are predicted to occur in the near future.

I wish to acknowledge the critical reading and suggestions made by Dr. Joanne S. Chopak of Georgia Southern University. Thanks to Mr. Jack Barrow for his photographic work on both editions of this text. In addition, I wish to express my sincere appreciation to Charlene and Lily, without whose support, patience, and sacrifice this text would have not been completed.

J. T. B.

Student Supplement for the World Wide Web

The World Wide Web has emerged as a valuable educational resource, and visiting cyberspace can make for a unique teaching and learning experience. The problem is: How do students identify sites that are academically appropriate and begin to use WWW sites in an educational context?

To make use of the resources of the World Wide Web in a practical way, *Jump-Start with WebLinks: A Guidebook for Fitness/Wellness/Personal Health* is a suggested supplement. Edited by Professor Eileen L. Daniel, Ph.D., this spiral-bound guidebook (approximately 168 pages) contains 36 topics on fitness, wellness, and personal health. For each topic (e.g., cardiovascular endurance, eating disorders), a topic introduction orients students to the topic and concludes with a mix of personal assessment and content-related questions.

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The Meaning of Health and Wellness

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During the last generation health education emerged from being a poorly defined, unprofessional practice into a full-fledged discipline. Fully certified and appropriately educated workers in many states practice health education as a specialty. Health education once was viewed as a rainy-day activity conducted by physical education teachers or coaches. Now health educators have degrees in health education equivalent to degrees in English, mathematics, and social studies, and they apply their specialty to the same extent. To understand the nature of their work, we first will examine the nature of health.

What is "Health?"

Defining the word *health* is a good place to begin examining the concept. It has nearly as many definitions as authors on the subject. A selected few follow. They say that health

> . . . is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. (World Health Organization, 1947)
>
> . . . is the condition of the organism which measures the degree to which its aggregate powers are able to function. (Oberteuffer, 1960)
>
> . . . is the quality of life involving dynamic interaction and interdependence among the individual's physical well being, his mental and emotional reactions and the social complex in which he exists. (School Health Education Study, 1967)
>
> . . . [is] an integrated method of functioning which is oriented toward maximizing the potential of which the individual is capable. It requires that the individual maintain a continuum of balance and purposeful direction with the environment where he is functioning. (Dunn, 1967)
>
> . . . is a quality of life, involving social, emotional, mental, spiritual and biological fitness on the part of the individual, which results from adaptations to the environment. (Dubos, 1968)
>
> . . . is a state of well-being sufficient to perform at adequate levels of physical, mental and social activity, taking age into account. (Lalonde, 1974)
>
> . . . is what enables a person to be what he wants to be and do what he wants to do. (Hochbaum, 1979)
>
> . . . is a relational concept . . . not an entity that can be directly promoted but a relationship between capacities and demands. (Baranowski, 1981)
>
> . . . [is] the capacity to cope with or adapt to disruptions among the organic, social, and personal components of the individual's health system. (Bates and Winder, 1984)
>
> . . . is a state of dynamic balance — or more appropriately as a process maintaining such a state — within any given subsystem, such as an organ, an individual, a social group, or a community. (Noack, 1987)
>
> . . . can be defined as the quality of people's physical, psychological, and sociological functioning that enables them to deal adequately with the self and others in a variety of personal and social situations. (Bedworth and Bedworth, 1992)

A primary theme running through all of these definitions of health is that of a *positive force*. They make frequent reference to health as a state of well-being. They make no reference at all to bad health or the common description of ill people, "They are in poor health." Health is good; the lack of it is bad.

Terris (1975) stated:

> Disease may occur without illness. Health and illness are mutually exclusive, but health and disease are not . . . Since health and disease may coexist, one cannot construct a continuum to show their relationship.

Shirreffs (1984) modified this theme only slightly by asserting that health and illness are separate and can exist together. You can be ill and still be healthy. **Illness** in this context is the presentation of visible symptoms, whereas **disease** is the underlying defect or malfunction within the organism. According to this point of

view, an ill person can be quite healthy. That person may be socially, mentally, and emotionally well, with a temporary physical malfunction to which the immune system has the ability to adapt.

Hoyman (1975) stated, "Health is a multidimensional unity, involving the whole person in his total environment." This reinforces the common theme of most definitions of the term *health* — that physical well-being is only a part of the state. Physical illness may seriously affect the physical body, while the mental, social, spiritual, and emotional person may be less affected, equally affected, or even unaffected. The total person is a multidimensional creature, and his or her health also must be seen as having many dimensions.

How would you measure your own health? Would it be in terms of years in your lifespan? Would it be in terms of the quality of those years? Would it be the quality of your relationships, your lack of debilitating illnesses, your ability to work? These are questions for each individual to consider. Perhaps more important questions would be: How can you improve your own health? What are you willing to do to make yourself healthier? Do some factors over which you have no control affect your health?

Dimensions of Health

The word *health* originally meant "wholeth," or "wholeness" (Dolfman, 1973). The state of being called health, as viewed through the origin of the word, then, implies involvement of the entire individual. This is what the World Health Organization meant in 1947 when it defined health as "complete physical, mental, and social well-being and not merely the absence of disease or infirmity." A few authors (Donatelle and Davis, 1994; Insel and Roth, 1994) have advocated the inclusion of an environmental dimension in the overall scheme of health. Many authors (e.g., Levy, Dignan, and Shirreffs, 1992; Bensley, 1991; Osman and Russell, 1979) have proposed additional dimensions such as emotional and spiritual.

With the current emphasis on recognizing one's cultural heritage and multicultural appreciation, an argument could be made that a cultural dimension is appropriate. These arguments sometimes are countered by contentions that the cultural development is part and parcel of the social dimension. Similarly, some have argued that the spiritual realm is linked inexorably to the emotional and mental dimensions. This text takes the position that all of the dimensions have undeniable linkages. Nevertheless, in our discussion we will address the dimensions of physical, emotional, social, mental (also referred to as intellectual), and spiritual health because these are addressed most frequently in the health education literature and are targeted for development in health education programs.

No dimension of health functions in isolation. When an individual has a high level of health, all dimensions function in an integrated, coordinated way. The person's environment, including school, family, work, and community, are in tune with one another to produce harmony. The way in which these aspects contribute jointly to the richness of a person's life helps determine that individual's uniqueness, as well as his or her health (Hammerschlag, 1988).

Physical Health

The physical condition of the body is reflected in a number of ways. Measurements such as blood pressure, heart rate, body composition, flexibility, agility, muscular strength and endurance, vital capacity, and strength provide some insight into physical health. Responses to injuries and recovery from disease can be indicative of physical health. People can behave in ways that enhance physical health, such as exercising regularly and eating a balanced diet. Equally important is to avoid behaviors that erode physical health, such as cigarette smoking and excessive alcohol consumption.

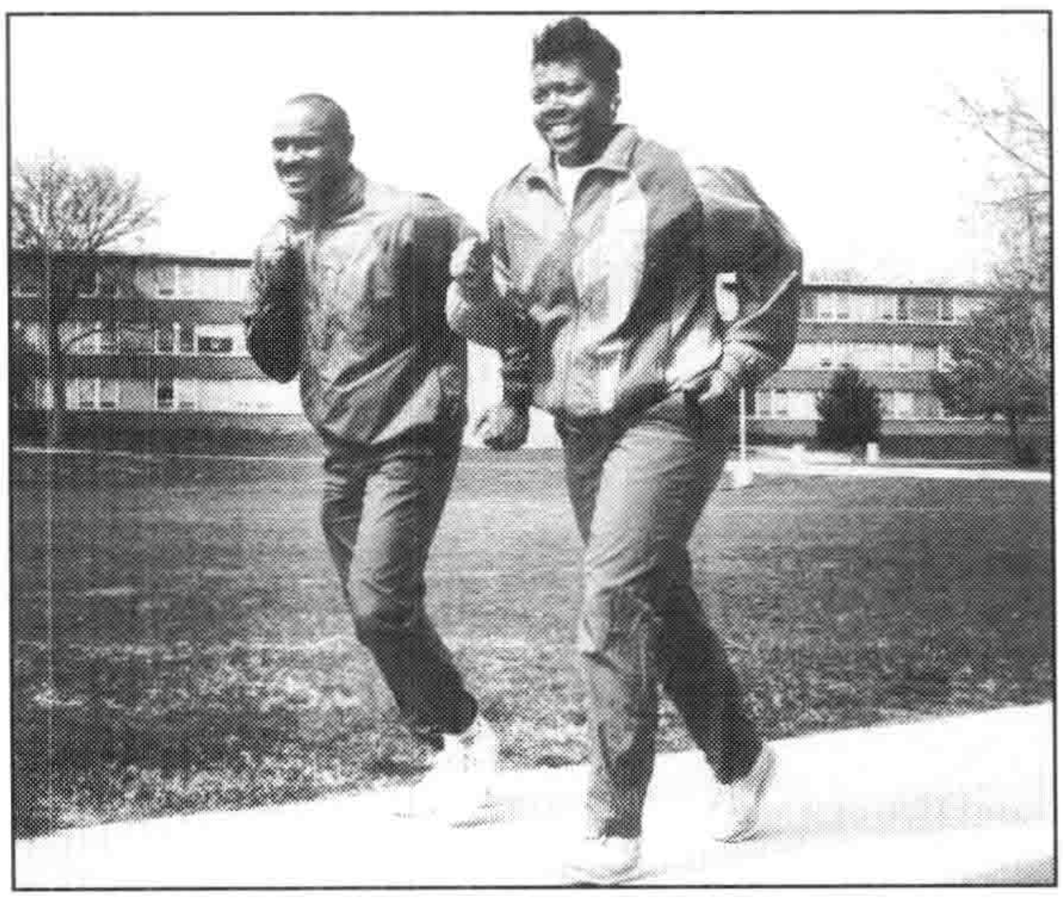
Our bodies frequently send messages to us: "Please let me get a good night's sleep," "Allow my sprained ankle to heal," "Send down some vegetables tonight," "My muscles are tense." These and other messages can guide us toward physical health. Getting regular medical checkups can head off medical problems before they

become serious. Basic self-care skills can help people cope with minor health problems on their own (Levin, 1976).

In many ways, physical health serves as a foundation for achieving wellness in the other dimensions of health. Progressing toward higher levels of health in other dimensions is difficult until basic physical needs, such as food, shelter, activity, and protection from environmental dangers, are met.

Emotional Health

Emotional health is generally defined as the ability to feel and express the full range of human emotions, give and receive love, achieve a sense of fulfillment and purpose in life, and develop psychological hardiness (seeing change as a challenge instead of a threat, and developing strong levels of personal commitment and coping skills) (Hawks, 1994). It requires understanding one's emotions and knowing how to cope with problems that arise in everyday life and the stress we all endure. It means being able to work and study, love and be loved, pursue the activities that define our being, and enjoy those activities. Emotional health encompasses self-esteem, self-acceptance, self-control, and the ability to share one's feelings. The quality of a person's life is reflected largely in his or her emotions.



Regular exercise is an essential part of physical health. It also contributes to mental, emotional and social well-being.

Emotions can affect our physical health. For example, people with good emotional health have low rates of stress-related diseases such as ulcers, migraine headaches, and asthma (Padus, 1986; Tucker, Cole, and Friedman, 1987). Long-term stress or emotional strife can lead to collapse of the immune system (Ornstein and Sobel, 1987; Squires, 1987), increasing the risk of developing other diseases.

Considerable evidence suggests that long-term stress can increase the risk of heart disease. Beginning in the 1950s, cardiologists Friedman and Rosenman (Rosenman, Freidman, et al., 1966) conducted a series of investigations into the relationship between coronary heart disease and personal life stress. They identified a personality type, which they labeled Type A, that seemed to be a significant risk factor in coronary heart disease when found in combination with elevated blood pressure and blood fats. **Type A** behavior is described as an action-emotion complex observed in a person aggressively involved in a long-term, ceaseless struggle to achieve more and more in less and less time, even against opposition by other things or persons. Coronary-prone Type A individuals are supposedly hard-driving, competitive, subject to vocational deadlines, restless, impatient, frequently in a hurry, self-centered, perfectionistic, and oblivious to the environment (Friedman and Rosenman, 1974).

In recent years a personality trait called **hardiness** has been credited with strengthening the immune system against the destructive effects of stress (Kobasa, 1979). Hardiness is characterized as an optimistic and committed approach to

Illness The presentation of visible symptoms.

Disease The underlying defect or malfunction within the organism.

Emotional health The ability to feel and express the full range of human emotions, give and receive love, achieve a sense of fulfillment and purpose in life, and develop psychological hardiness.

Type-A An action-emotion complex observed in a person aggressively involved in a long-term, ceaseless struggle to achieve more and more in less and less time, even against opposition by other things or persons.

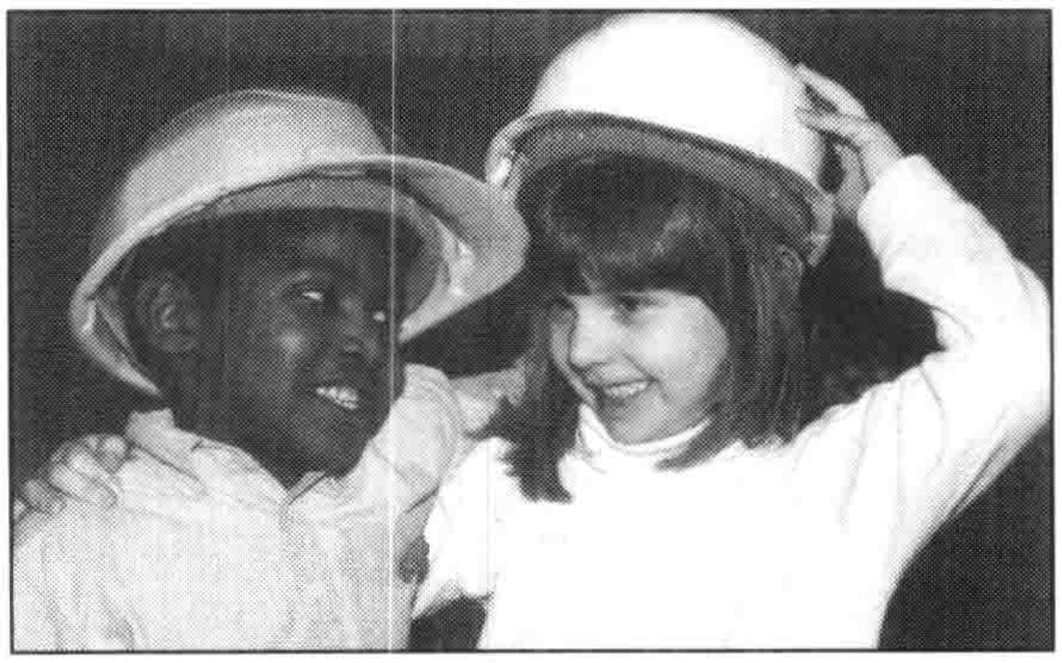
Hardiness An optimistic and committed approach to life, viewing problems as challenges that can be handled.

life, viewing problems, including disease, as challenges that can be handled. Hardiness, or something akin to it, can be developed through stress management techniques and reassessment of one's own goals and priorities. Many of the things that cause our stress, such as our families and work, also give us joy. One of the keys to emotional health is to realize that we usually can manage stressful situations and can reduce the effects of stress on our bodies and minds.

Social Health

We all occupy roles in a number of groups or institutions. These roles include son or daughter, friend, student or teacher, neighbor, co-worker, and mate. Each role has expectations. **Social health** refers to the ability to perform the expectations of our roles effectively, comfortably, with pleasure, without harming other people (Levy, Dignan, and Shirreffs, 1992). It is characterized by a concern and fondness for others, the ability to show respect, a sense of belonging within a larger social unit, and the ability to communicate effectively with others.

Performing role expectations sometimes means taking risks. It sometimes means having responsibilities. Frequently these responsibilities impact other people and involve meeting others' needs. These include the needs for love, intimacy, safety, companionship, and cooperation — all important to social health. When people are deprived of these needs, they at times act in ways that threaten their overall health and well-being (Moss, 1973; Gore, 1978).



Well-planned educational experiences promote social health.

Mental Health

Mental (or intellectual) health encompasses the intellectual processes of reasoning, analysis, evaluation, curiosity, humor, alertness, creativity, logic, and memory. To this extent, it includes the ability to make sound decisions and to think critically. Emotional health sometimes is considered to be a part of mental health, as emotions can act to the detriment of intellectual decision making.

Conforming to social demands is not necessarily a mark of mental health. Questioning what goes on around you indeed may be a sign of mental health. Actions and reactions alone do not classify us automatically as mentally healthy or mentally ill. A situation that may produce anxiety for some people may not cause anxiety for others because of basic personality differences. Showing no anxiety in a given circumstance, however, may be a sign that the person is not facing a problem or trying to resolve it. In actuality, anxiety may lead to solving problems.

Looking at a group of people he thought had fulfilled a good measure of their potential, Abraham Maslow (1968) identified qualities in people whom he described as *self-actualized*. These qualities also may be applied to people who are mentally healthy. According to Maslow, these people:

- are able to deal with the world as it is and do not demand that it should be otherwise;
- are able to largely accept themselves, others, and nature;
- experience profound interpersonal relations;
- have a continuing fresh appreciation for what goes on around them;
- are able to direct themselves rather independently of culture and environment;
- trust their own senses and feelings;
- are creative;
- are democratic in their attitudes.

Spiritual Health

A review of the literature shows how elusive a definition of spiritual health is. So many definitions abound that looking at what comprises

the spiritual dimension may be simpler. Barriers to agreeing on a single definition are its lack of clear structure, parameters, or measurable outcomes (Eberst, 1984) and its perceived closeness to religion, which makes it a somewhat controversial classroom topic (Collins, Hurst, and Jacobson, 1987). While acknowledging that the spiritual is the least obvious and measurable of the known dimensions of health, Banks (1980), based upon her research, stated that the spiritual dimension of health contains four aspects:

1. a unifying force within individuals;
2. meaning in life;
3. a common bond between individuals;
4. individual perceptions of faith.

The unifying aspect of the spiritual dimension is the force that integrates all the other dimensions (physical, mental, social, and emotional). Viewing the individual as a whole, what affects one dimension will act upon all the others, thereby affecting the individual's total well-being. The spiritual dimension, then, can be viewed as the central core that bonds and serves as a grounding source for the other dimensions.

The second major aspect of the spiritual dimension is the individual's identification of what is meaningful and purposeful in life. People can express meaning and purpose to life in many ways, such as through nature, art, meditation, religion, political action, or altruism. This is highly personal and specific to the person. It may be the main drive to the individual's successes in life and what he or she interprets as life failure.

The spiritual dimension transcends the individual to create a common bond between individuals, a trait unique to this dimension. This capacity could be manifested in a set of principles or ethics that govern our conduct, a sense of selflessness and empathy for others, or a commitment to a higher power. In reviewing three studies that investigated the perceptions of people identified with health education regarding the spiritual dimension to health or the concept of human-spiritual interaction, Banks, Poehler, and Russell (1984) found that a major concept to identify the spiritual dimension is *selflessness* — doing more for others than for the self. It allows for the sharing of love, sacrifice, trust, integrity, warmth, hope, forgiveness, and compassion.

The fourth component of the spiritual dimension has to do with perceptions of what causes the universe to work the way it does, recognition of powers beyond the natural and rational, survival, and pleasure (Banks, 1980). Each individual has a unique sense of his or her own perception of the cosmos.

Pilch (1988) took a slightly different approach to spirituality, identifying five elements of human life: freedom, purpose in life, life's fulfillment, motivation, and conversion. Spirituality must be freely chosen. The second element, purpose in life, corresponds roughly to meaning in life, although Pilch ascribed a distinctly more religious meaning than Banks did. Life's fulfillment is seen as discovering how to make the best of bad situations. Motivation is a way of getting things started and keeping them going while remaining in charge of the process or development. Two powerful motivating factors are a strong sense of self-esteem and a critical assessment and appreciation of one's values. Conversion, seen more as a process than a state, is a broadening of one's horizons, a widening of perspective.

The spiritual dimension may or may not involve religion. In view of the doctrine of separation of church and state that we enjoy in the United States, educators should distinguish between religion and spirituality. Although religion is an integral part of the notion of spirituality for some, one does not have to profess any particular religion to be spiritual. Spirituality neither excludes nor is exclusive to the religious (Diaz, 1993).

Major Factors Influencing Health

If you were to sit down with pencil and paper, you probably could list hundreds of factors that directly influence your health and the health of

Social health Ability to perform the expectations of our roles effectively, comfortably, with pleasure, without harming other people.

Mental (or intellectual) health Ability to make sound decisions and think critically.

others. Most, if not all, of those factors could be grouped into four categories: heredity, environment, health care services, and behavior.

Heredity

A number of factors affecting our health are inherited via our genetic background and therefore are beyond our control. Some of these traits may contribute to effective functioning; others may interfere. Disorders such as Down syndrome, Marfon's syndrome, sickle cell anemia, thalassemia, and Tay-Sachs disease have their roots in **heredity**. Almost daily, scientists discover links between certain defective genes or gene combinations and specific diseases. Recent research has targeted a gene responsible for familial breast cancer and genes that make a person susceptible to colon cancer. Even alcoholism has been demonstrated to have a strong genetic component. Tendencies toward disorders such as hypertension have been shown to be genetic and more likely to appear in certain ethnic groups.

Our gender, and possibly our size, can make us susceptible to certain influences on our health. Percentage of body fat, weight, and even obesity can be inherited. Just as a genetic propensity toward high levels of body fat may influence an individual's health negatively, the propensity toward a low or moderate level of body fat is a positive influence on health.

Environment

The environment is becoming more and more important to our health and the deterioration of health. As the ozone layer is being depleted, we humans are exposed to more ultraviolet radiation. The risk of eye damage and skin cancer is greater with exposure to the sun. Sunburn is really radiation burn, and skin cancer can develop even without sunburn.

Our water and food supplies are becoming more and more polluted. Agricultural runoff and some irresponsible industries have made water unsafe in many American communities. Certain cases of cancer and even fetal damage have been traced to polluted water. If water is contaminated, the food we eat also is likely to be contaminated.

The air we breathe is a health hazard to many of us. For years several large urban areas have exceeded acceptable levels of pollutants, such as ozone and carbon monoxide. Winds, offending industries, and automobiles have spread dense pollutants to many rural areas as well. Pollutants in the air may fall to the earth in the form of acid rain, further damaging the soil, water, and food. Fortunately, levels of many air pollutants (smog, carbon monoxide, sulfur dioxide emissions, soot) have improved measurably, though it remains to be seen if any long-range positive environmental impact will occur.

The U.S. Congress and governmental agencies such as the Environmental Protection Agency have wrestled for years with the problem of air pollution. The lobbying power of big business has hampered the effectiveness of many initiatives to clean up the air because implementation of the regulations carries tremendous financial burdens. In recent years, stricter regulations mandated by the federal Clean Air Act have been implemented.

Millions of people are susceptible to allergic reactions to substances in the environment. The presence of these substances may be increased by climactic conditions.

Noise has been identified as an environmental hazard. Some sources of noise, such as music played at high volume through headphones and at rock concerts, are voluntary. Many people, however, are exposed to high decibel levels in their workplace and at home. Besides the noise of appliances, televisions, and stereos, many Americans live close to airports, highways, highly congested areas, and construction sites. Indeed, areas of high population density are a source of almost constant exposure to excessive noise levels.

Many Americans consider themselves and their children subject to social and cultural pollution via television, radio, and computer online services. Certain depictions of violence and sexuality are offensive to some people and certainly present an unhealthy and unrealistic

picture of sex to children. Advertisements for foods and alcohol and billboard and magazine advertisements for tobacco depict inaccurate and misleading situations regarding these products. Young children and teens do not have the maturity to decipher advertising messages accurately. To say that parents can turn off the television or throw out the magazine is missing the point. Children cannot avoid these images in today's world.

The modern network of society may not provide an environment conducive to individual growth. Instead it may impinge on the individual's freedom to function adequately. Overcrowding is an example. Failures in the family, the school, and the church to provide opportunities for children to develop self-esteem may contribute to experimentation with alcohol or other drugs (Butler, 1982).

Health Care Services

The cost and availability of health-care services have an obvious effect on the health of every American. The rise in cost of health care over the past several years has far outdistanced inflation. An ever-increasing percentage of our gross national product is devoted to the delivery of health care. In 1950, health care expenditures totaled about 4.4% of the gross national product. That percentage rose to 11.1 in 1988 and to about 14% in 1992 (Consumers Union, 1992). If costs continue to rise at current rates, the percentage of gross national product spent on health care could exceed 17% by the year 2000. This would amount to over $5,500 per person per annum. The cost of health care has exceeded the means of many Americans. Insurance companies have become more selective in the procedures they cover and the clients they will insure. All this has made health care too expensive for a huge number of Americans.

For those who can afford health care, whether it be through their own resources, private or group health insurance, or government-sponsored programs such as Medicaid, the primary emphasis of care traditionally has been on diagnosis and treatment. The emphasis on expensive treatment is a major cause of the higher costs and lack of availability. Even though we know how to prevent many illnesses and disorders, the medical community has not done its part in stressing prevention to its patients. The medical community cannot bear the full blame, because we, the consumers, must put prevention into practice by making decisions that affect our lifestyles and daily lives and thereby gain the full benefit of preventive medicine and avoid the costs of treatment.

In 1972 the Health Maintenance Organization Assistance Act was passed with the hope of setting up a new system for delivering health care. Although the HMO movement has not lived up to its potential thus far, it at least established that health care costs can be reduced and that health education and prevention can be implemented successfully into the medical system. By definition, HMOs have a health education component, the effectiveness of which varies greatly. Although individual HMOs differ widely in delivery of services, costs, and health education, the HMO concept offers a good deal of promise.

Regardless of the model for delivering services, effectiveness of the care frequently depends upon the quality of communication between practitioner and patient. Communication may be weakened by physicians who fail to bridge the gap between medical jargon and the patient's ability to understand and comprehend. Medical schools have a responsibility to develop in aspiring physicians the kind of communication skills necessary to bridge this gap. Physicians should consider each patient with his or her own strengths and weaknesses and try to overcome weaknesses that impede good communication.

Patients, too, may impede communication. They may be reluctant to discuss or describe their symptoms and talk about issues that are embarrassing to them. Health educators can assume a role in this area. Students and clients should understand the importance of taking an active part in their own health and complying

Heredity Genetic background that programs each of us in some ways.

with physicians' advice. They cannot do this unless they make a special effort to provide all the information a physician needs to render an accurate diagnosis and unless they understand fully the advice they receive. Patients have to feel comfortable and be assertive enough to ask questions and to leave the appointment only after they have all the information necessary to comply with the physician's advice. Fostering assertiveness is one role of health educators.

Ross and Mico (1980) identified several transitions in the field of health care that already have produced or have the potential to produce positive effects on the system in the coming few years. The first is a definite change in attitude in the United States regarding health care as a right rather than a privilege. With the advent of insurance companies, most Americans gained access to health care. In recent years, however, health care costs have driven insurance premiums beyond the reach of many citizens. Approximately 39.7 million Americans, including 10 million children, are without health insurance (U.S. Bureau of the Census, 1995). Put in perspective, the number of uninsured Americans exceeds the entire population of Canada by about 50%.

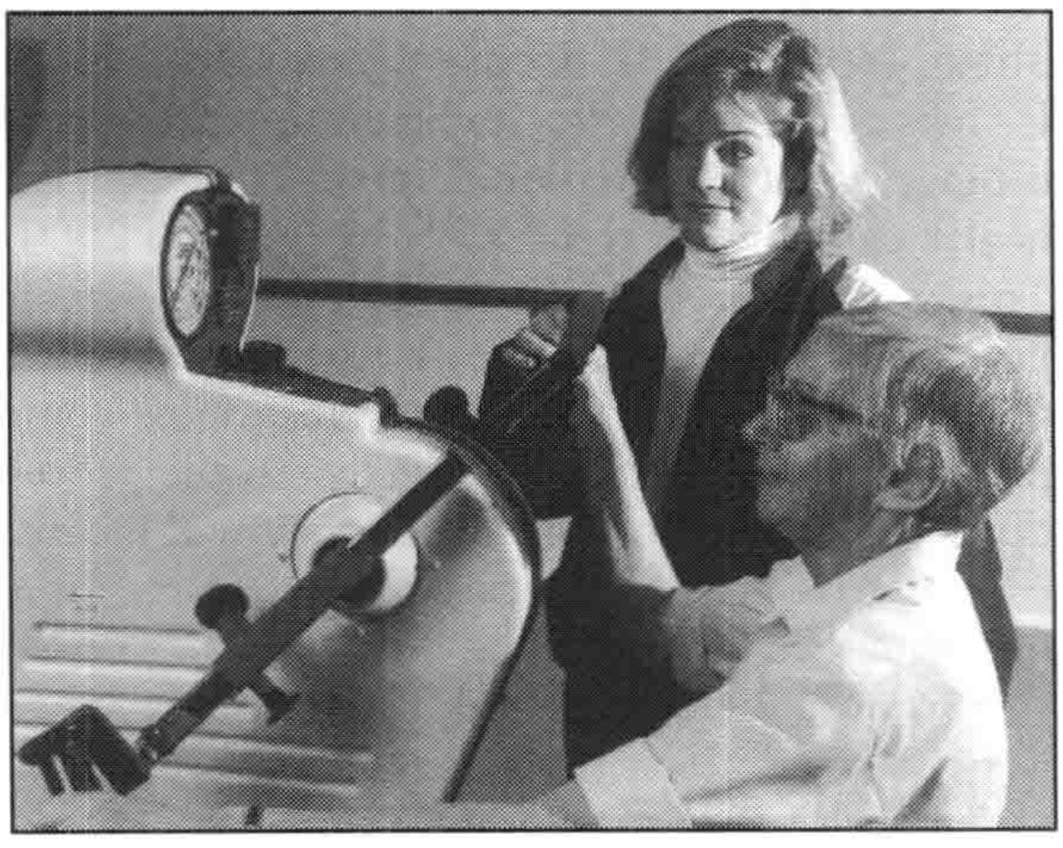
This situation is at least partially a result of another transition — from costs being determined by professionals to being determined by insurers. This gives an enormous amount of power to a third party in the delivery relationship, most apparent in the Medicaid system of establishing diagnosis-related groups (DRGs). DRGs establish payment schedules for specific diagnoses, which means that Medicaid will pay only so much for a medical procedure. It also means the insurer influences the choice of treatment procedures or even to treat the patient at all. If this power is allowed to be concentrated in the hands of for-profit insurers, the implications for health care are frightening.

Health care costs are being influenced by other factors as well. We have seen a trend to prepare a large number of specialists. Even the family practitioner is now a specialist. Specialists' services generally are more expensive than those of generalists, the former "family doctors." More recently the number of specialists being trained in medical schools seems to be decreasing.

The traditional practice of a single physician's maintaining and operating an office is rapidly becoming a part of history in most areas. Grouping several physicians in one office enables reduction of overhead and staff salaries. An example of this trend is the health maintenance organization (HMO), one form of which is a single company that employs physicians of many specialties and pays each a salary. This is a powerful contrast to individual physicians who charge each patient for each service.

Undoubtedly, the health care delivery system must be changed in substantial ways. The 1992 election ushered in an administration that promised to change the way health care is delivered and financed. All of the players — insurers, providers, consumers, auxiliary businesses — provided input, much of it conflicting. Opposition to comprehensive health care reform was stunning as powerful lobbies and interest groups waged campaigns to defeat major proposals. Several states, however, have begun to conduct statewide demonstrations that they hope will reduce costs while providing coverage and furnish models for other states and for the federal government.

The most powerful transition in health care stems from the patient. From being totally



The availability of the professional practice of physical therapy is an example of the delivery of health care services to the public. Photo courtesy of Johnson & Johnson.

dependent on physicians, and passive recipients of health care, more people are becoming active in their own health care. They are forcing physicians to regard them as partners in the support of their own health. They realize that their greatest health ally is the self.

Behavior

To maximize the health of the population, individuals must take responsibility for their own actions and the status of their own health. Although many causes of illness and deteriorating health are linked to heredity and to environmental pollutants, lifestyle is a determining factor in the state of one's health. The individual is the ultimate decision maker in his or her own life. What we do is the major influence on our health. The implications for behavior change, habit formation, and lifestyle development form the basis for health education.

Consider that:

— cancer is the second leading cause of death in the United States, and lung cancer causes more deaths than any other form of cancer. The American Cancer Society (1996) estimated that cigarette smoking is responsible for 90% of the lung cancer deaths in men and 79% of the lung cancer deaths in women.

— a major risk factor for oral cancer is the use of smokeless tobacco (American Cancer Society, 1996).

— a diet high in fat or low in fiber, or both, may be associated with colon and rectum cancer (American Cancer Society, 1996).

— diet, cigarette smoking, and lack of exercise are related closely to heart disease, the leading cause of death in the United States (Levy, Dignan and Shirreffs, 1992).

— every day about 3,000 American young people become cigarette smokers (American Heart Association, 1994).

— even though HIV is not contracted readily, many people engage in the precise acts (unprotected sex and injectable drug use) that transmit the disease.

— about one-third of males and one-fifth of females initiate sexual intercourse before age 15 (Centers for Disease Control, 1992).

— even though the U.S. Public Health Service identified cigarette smoking as "clearly the largest single preventable cause of illness and premature death in the United States" (U.S. Department of Health, Education and Welfare, 1979), about a fourth of the adult population continues to smoke (Centers for Disease Control and Prevention, 1994).

— the U.S. Surgeon General set forth as an objective for 1990 the immunization of 90% of all children for polio, measles, pertussis (whooping cough), tetanus, tuberculosis, and diphtheria. Although the immunizations are inexpensive and have been available for decades, many parents are not having their children immunized. Despite campaigns across the country, only 67% of American two-year-olds have been fully immunized against preventable diseases (Children's Defense Fund, 1996). CDC reported that, though the number of fully immunized American children ages 19–35 months was at a record high by the summer of 1995, about 25% of the nation's toddlers were not fully immunized against mumps, measles, polio, and other common childhood diseases. American children are less likely to be fully immunized against polio than children in 16 other countries; nonwhite babies in the United States are less likely to be immunized than children in 55 nations, including Albania, Oman, Botswana, Sri Lanka, Tunisia, and Jamaica (Children's Defense Fund, 1991).

— although using lap and shoulder safety belts in vehicles reduces the risk of serious injuries and fatalities by 45% to 55%, many adults fail to use the restraints (Insel and Roth, 1994) and more than 19% of high school students rarely or never use safety belts when riding in a vehicle driven by someone else (CDC, 1995).

— more than 80 percent of high school students have had at least one drink of alcohol during their lifetime (CDC, 1995).

Although heart disease, cancer, and stroke have been listed as the official leading causes of death in the United States for several years, the real causes of death and the factors that influence the causes appearing on the official list provide more insight into the role of individual behaviors in causes of death. McGinnis and Foege (1993) summarized the results of several studies in an effort to arrive at the actual causes of death in the United States in 1990. The results of this effort are presented in Table 1.1. The deaths presented in the table represent about half of the deaths in the United States in 1990. The impact of individual behavior on likelihood of death is obvious.

The recognition that behavior is related to health is not new. Belloc and Breslow (1972) followed nearly 7,000 adults for 5½ years. Their research showed that life expectancy and better health are related significantly to six simple health habits:

1. Eating three meals a day at regular times and no snacking;
2. Exercising moderately three times a week;
3. Getting adequate sleep (7 to 8 hours each night);
4. Maintaining normal weight;
5. Drinking alcohol in moderation, if at all;
6. No smoking.

Among the findings were that 80% of deaths caused by cancer and cardiovascular disease are premature and can be prevented by practicing these six behaviors.

A former Surgeon General (U.S. Department of Health, Education and Welfare, 1979) pointed out that individuals can improve their health by taking actions for themselves, including:

1. Eliminating cigarette smoking;
2. Decreasing alcohol use;
3. Making moderate dietary changes, including reducing the intake of calories, fat, salt, and sugar;
4. Doing moderate regular exercise;
5. Periodically being screened for disorders such as high blood pressure and certain cancers;
6. Adhering to speed laws and using seat belts.

Kolbe (1993) stated that only six types of behaviors cause the major health problems that face the nation. If looked upon as behaviors that could be changed or eliminated, they bear remarkable resemblance to the former Surgeon

Table 1.1 Actual Causes of Death in United States, 1990

CAUSE	ESTIMATED NO. OF DEATHS[1]	PERCENTAGE OF TOTAL DEATHS
Tobacco	400,000	19
Diet/Activity Patterns	300,000	14
Alcohol	100,000	5
Microbial Agents[2]	90,000	4
Toxic Agents	60,000	3
Firearms	35,000	2
Sexual Behavior	40,000	1
Motor Vehicles	25,000	1
Illicit Use of Drugs[3]	20,000	<1
TOTAL	1,060,000	50

[1] Numbers over 100,000 are rounded to the nearest 100,000; over 50,000 rounded to the nearest 10,000; below 50,000 rounded to the nearest 5,000.
[2] Does not include HIV or deaths consequent to tobacco, alcohol, or drugs.
[3] Does not include deaths related indirectly, such as deaths from accidents, homicides, infections with HIV, and hepatitis.

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