Introduction

The goal of this book is to explore the ways in which health behavior develops in childhood in the context of childhood socialization processes. In the first chapter, several issues are presented. The first aim is to define the state of children's health in the United States. Most parents want their children to be safe and healthy, but implementing that desire can be a difficult and challenging process. According to recent surveys of Americans' health habits, American parents and children are fatter, more stressed out, exercise less, and pay less attention to what they eat than ever before. Many of the most serious health and social problems facing our nation today have their origins and potential solutions in health behaviors developed in childhood. At least 8 out of 10 of the leading causes of death – heart disease, cancer, strokes, injuries, chronic lung disease, diabetes, liver disease, and atherosclerosis – are strongly related to such behaviors and conditions as diet and obesity, exercise, smoking, and drinking alcohol. What must be addressed is that these health behaviors begin in childhood. By the age of 12, more than 40% of American children have at least one modifiable risk factor for coronary heart disease (Richter et al., 2000).

Physicians and other public health and medical professionals now know enough about how to keep children well so that debilitating illness and disease should be much less frequent than they are in the United States. Yet, in this country, children's health suffers from birth. The overall U.S. infant mortality rate ranks 22nd worldwide; 9 out of every 1,000 children in the United States die before age 1, which is twice the infant mortality rate of Japan. Between 30% and 55% of 2-year-old American children are not adequately immunized, and the percentages of underimmunized children are much higher in major U.S. cities. Today, a 2-year-old in

Mexico City is more likely to be fully immunized than a similar child in the United States. Even many older children are not staying healthy in the United States. Although many parents say that they try to limit the salt, caffeine, fat, and sugar in their children's diets, many children have very unhealthy diets. Only about one-third of children always wear helmets and other protective gear when riding bicycles, skates, or skateboards, and over two-thirds wear them only sometimes. Several recent studies have demonstrated important gaps in the fitness levels of children, and measured declines in physical activity over the past decade have been documented. Nearly one-third of children aged 3 to 17 are overweight for their age and gender.

In an effort to understand the etiology of children's health status, this chapter has, as its second goal, to review the historical and contemporary perspectives utilized in portraying the dynamics of child health. Until recently, the dominant model of children's health has been biomedical, simultaneously emphasizing biological models of wellness and illness and disregarding social, psychological, and behavioral dimensions of health. However, the dominance of the strict biomedical model of disease is lessening, and a model incorporating concern with behavior and the whole person is much more prevalent in current health research and clinical settings. Developmental models have also undergone a series of revisions over the past three decades, resulting in increased recognition of biological conditions such as wellness and illness as factors in development. Not only are genetic and constitutionally based differences among infants and children more often acknowledged as having an important impact on health and development, but the continuing importance of biological factors, such as adequate nutrition for proper cognitive development, is increasingly addressed. New developmental models that incorporate both biological and experiential components have appeared. These models demonstrate that neither biological nor experiential factors alone yield adequate understanding of development and that only by combining these components can one better understand development. With the development of these new medical and developmental models has come increasing interest on the part of those concerned with children's health in the contribution of an expanded range of variables to child health. The effects of such factors as children's health attitudes, knowledge, and behavior, as well as the influence of children's socialization agents and environments on child health status, are increasingly recognized as critical to wellness promotion and illness prevention in childhood. Moreover, the developmental progression of these children's health orientations is being

increasingly recognized as a critical issue in efforts to promote children's health. The final aim of this chapter is to frame several important questions that are addressed in the remainder of the book, including how children's developmental status relates to their health orientation and the socialization of that orientation, and what familial or other social environmental conditions provide the opportunity for and promote the acquisition of children's health knowledge, attitudes, and behavior.

Chapter 2 presents a thorough and detailed developmental analysis of children's attitudes toward an understanding of health concepts. Children's developmental ideas about these concepts, as exemplified by the classic work of Rashkis (1965), Bibace and Walsh (1980), Campbell (1975), Natapoff (1978), Perrin and Gerrity (1981), and Simeonsson, Buckley, and Monson (1979), are considered in this chapter. Children's stage-related understanding of specific health concepts, such as contagion and germs, are also presented in this chapter, as researched by Wilkinson (1988), Nagy (1951, 1953), Siegal (Siegal & Peterson, 1999), and others. Controversy concerning the timing and sophistication with which children achieve these understandings is also explored and explained. Alternative cognitive explanatory models for children's health understanding are also portrayed, including script theory as developed by Nelson (1986) and children's intuitive theories of behavior as described by Carey (1985).

A second focus of the research on children's health attitudes and behavior is individual differences in these areas, as reflected in such constructs as health locus of control, perceived vulnerability to health problems, and health motivation in work by such researchers as Gochman (1987), Parcel and Meyer (1978), and others. A following section suggests an integration of the stage theory and individual differences perspectives on children's health understanding. The role of health attitudes in children's preventive health behavior, and its relations to children's developmental status, is also explored in this chapter. The moderate relations between children's health-related attitudes and health behavior are discussed, and theoretical reasons for this modest link are offered. Finally, children's health behavior is described. A developmental portrait of children's self-initiated health behavior is offered, including nutrition, exercise, and other health and safety domains. While most of young children's preventive health care is initiated and managed by parents, children become, with age, increasingly able and expected to manage their own preventive health. The chapter ends with descriptions of a unique context in children's health behavior: their self-initiated visits to health care providers in school such as school nurses.

Parents' influence on their children's health through a variety of mechanisms, including their beliefs and behavior, is considered in Chapter 3. This chapter examines the developmental progression of how parents' beliefs affect children's health attitudes, behavior, and outcomes. While parents' health attitudes are a somewhat indirect influence on children's preventive health behavior, they usually function via their influence on parents' behavior rather than by direct communication to the child, and the dynamics of this influence change as the child develops. Developmental research investigating such aspects as the value parents place on health, parents' perceptions of the seriousness of and susceptibility to disease, parents' attitudes toward medication, the seriousness with which parents consider their children's symptom-reporting, and parental health locus of control is presented in this chapter. An important distinction is made between parents' beliefs about their own health and parents' beliefs about their children's health, and the relative predictive value of each in determining how parents will act on behalf of their children's health. Family- and culturally based belief systems that affect parents' health attitudes are also discussed. The impact of parent health-related beliefs on child health behavior and outcomes over the course of child development is also presented. The mechanisms by which parents' beliefs about children's health influence child health behavior and outcomes are outlined, including a discussion of children's developmental status and parents' thought processes that intervene to mediate parents' health socialization strategies and children's outcomes. The conceptual framework is guided by recent social information processing models as applied to parental health beliefs and decision making.

Parental childrearing behavior, in the context of children's developmental status, is explored in Chapters 4 and 5 as pathways through which parents' beliefs influence children's health. The work of such investigators as Pratt (1973) and Lau and Klepper (1988), and cross-cultural work by Olvera-Ezzell, Power, and Cousins (1990) and Yamasaki (1995) on the impact of non-health-specific parental child-rearing behavior on children's health behavior, are utilized to illustrate this path. Other mechanisms of childhood socialization of health behavior by parents, such as modeling and reinforcement, and establishment and enforcement of child health behavior, are discussed theoretically and empirically in great detail. Moving beyond the individual level of analysis to a consideration of the family as a health socialization unit is explored as a useful framework for further understanding the dynamics of childhood health learning. With this perspective, three important but somewhat neglected

aspects of parents' influence on child health are examined with respect to child development: the impact of parent–child emotional interactions on children's health, the effect of parents' interactions with others (e.g., marital interaction), and the impact of parents' own health on children's health. A neo-Vygotskian perspective is offered as a way of conceptualizing the socialization strategies of parents in relation to the promotion of children's health.

As children develop, peers and schools play increasingly important roles in determining their health attitudes and behavior, and their influence is examined in Chapter 6. Peers provide either complementary or competing sources of health influence, along with parents and other socializing agents. Research on childhood peer socialization in health contexts, as a function of child developmental status, is reviewed. The theoretical and empirical work on the changing relations between parental control and peer influence as children develop is applied to health contexts, as exemplified by work by Steinberg, Lamborn, Dornbusch, and Darling (1992), Smetana, Kochanska, and Chuang (2000), and others. Schools have been demonstrated to significantly influence children's behavior, apart from the family. Effective school-based health education teaches children what healthful and unhealthful behaviors are and the consequences of practicing these behaviors. Moreover, in schools, interventions designed to modify children's health attitudes and behaviors are most often initiated. The advantages of school-based health education are presented, together with a developmental analysis of formal school-based education efforts and their efficacy. Deficits in current school-based health education are examined, and its potential importance is evaluated.

Parents, schools, and peers are not the only influences on children's health; television viewing and exposure to other media, examined in Chapter 7, help shape children's health attitudes and behavior. In light of statistics documenting the amount of time children spend watching television, which includes a surprising number and variety of events that have clear implications for health and risk, this chapter analyzes in detail research on television's influence on children's health. Developmental aspects of how children learn about health from television are presented. Then the content of television is examined; commercials are particularly salient sources of influence on children's health, with billions of dollars spent each year by corporations to televise commercial advertisements for nonnutritional foods, alcohol, and tobacco products, which are attractive to children and detrimental to their health. Other television programming, including soap operas, televised movies, MTV videos, and prime-time

presentations, are also examined for their messages and impact on children's health attitudes and behavior. The effects of children's television viewing on several aspects of health beliefs and behavior are then examined, including the impact of programs depicting suicide, food intake, medicine-taking, sexuality, and standards of beauty and attractiveness. Finally, the indirect impact of television watching on children's health is explored, which concerns how television alters time use and activity choice in children. The consequences for children's health of reduced recreational physical activity when television is available are presented.

In Chapter 8, the ways in which children's health attitudes, behavior, and health status are affected in yet another way, namely, by the social ecology in which children and families are located (cf. Bronfenbrenner, 2000), are discussed. This ecology promotes or constrains child health behavior and outcomes. Although demographic status, specifically socioeconomic status, has traditionally been the focus of efforts to describe and predict children's health, in this chapter it is suggested that social class is not an explanatory variable with respect to health. In most cases, social class merely describes parents and children who vary in health attitudes, behavior, and actual health. Parents and children of higher social class usually experience better health services access and utilization, as well as better health. Although the mechanisms by which social class affects health are poorly understood, parental socioeconomic variables such as education, occupation, and income are clearly associated with children's health status. These factors also strongly influence aspects of the health environment in which children develop, including such aspects as parent–child interaction, parental beliefs and attitudes, physical environment attributes (e.g., space, crowding, cleanliness, noise), organization, regularity and predictability of schedules and caregiving, and the availability of food, materials, and other resources. The research of several investigators exploring the relation between health and environment in childhood within a developmental perspective is presented. The developmental trajectories of how poor environments compromise children's health are also explored in this chapter.

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Mechanisms and Consequences of Socializing Children to Be Healthy

Heart disease and cancer are the first and second leading causes of death in the United States. Although great strides have been made in reducing deaths from heart disease in the past 20 years, due to improvements in treatment for hypertension and myocardial infarction and changes in diet, smoking levels, and exercise patterns, deaths from many cancers continue to increase. Cigarette smoking is the leading cause of lung cancer in both men and women. We know that 80% of smokers begin to smoke during adolescence and that attitudes learned in childhood and adolescence are the most powerful predictors of smoking in adulthood. Imagine how much additional reduction in the number of deaths caused by these two major killers could be achieved if children began to eat healthy diets in childhood, if they never started to smoke cigarettes, and if physical exercise was a natural part of every child's life.

There appears to be an inadequate U.S. national commitment to prevention and health promotion; our national investment in prevention is estimated at less than 5% of the total annual health cost (Stone et al., 2000), and without this orientation toward prevention, the prospects for children's health and functioning cannot be improved. Money is available to provide expensive hospital care for those with serious illnesses; thousands of preterm and otherwise sick infants are hospitalized for months at a time. But Americans make inadequate attempts to improve children's lives before they get sick, and many of today's children will reach adulthood unhealthy.

In order to understand the etiology of children's health status, it is important to review the historical and contemporary perspectives utilized

in portraying the dynamics of child health. Until recently, the dominant model of children's health has been biomedical, simultaneously emphasizing biological models of wellness and illness and disregarding social, psychological, and behavioral dimensions of health (Engel, 1977; Tinsley & Parke, 1984). However, the dominance of the strict biomedical model of disease is lessening, and a model incorporating concern with behavior and the whole person is much more prevalent in health research, in both academic and clinical settings.

Sameroff's (1989) transactional model of development suggests that two continua – a continuum of reproductive causality, which includes both genetic constitutional factors and birth-related trauma, and a continuum of caretaking causality, which includes the social, intellectual, and physical environments – are necessary for adequate prediction of developmental outcomes. Other models such as systems theory approaches similarly stress the necessity of considering the complex interplay between biological and experiential factors (Ramey, MacPhee, & Yeates, 1982; see also Sameroff, 1982). These shifts suggest that the traditional medical and developmental models have undergone modification, resulting in mutual movement to incorporate major tenets of each.

Other factors have also contributed to the emerging redefinition of the relation between traditional medical and developmental models of child health and development. Due to a decrease in child mortality and morbidity rates (brought about by the conquest of a number of major infectious diseases by biological medical science), pediatric medical science is also preoccupied with two major concerns: (1) the prevention of chronic diseases related to lifestyle and social environment later in life and (2) parents' requests for child-rearing advice (Doherty & Campbell, 1988; Tinsley & Parke, 1984).

Currently, medical science is significantly focused on illnesses caused by noninfectious processes (e.g., heart disease, cancer). Single microbiologic factors are not solely responsible for these types of diseases; lifestyle factors such as diet and smoking are considered to be significant contributors. Preventive measures, emphasizing lifestyle and behavior, are highly valued ways in which to maximize wellness. Health professionals increasingly target many of their efforts to influence children's lifestyle and behavior in the belief that health habits are formed early and persist throughout life. Considerable work has been accomplished utilizing a variety of methodologies and paradigms, which illustrate the importance of such nonbiological factors for children's health.

Secondly, parents' requests for childrearing advice are taking increasing amounts of pediatricians' professional time. Estimates of the extent to which pediatric primary care visits involve childrearing, behavior problems, or other psychological components vary from 37% to 50% (Duff, Rowe, & Anderson, 1973; Glascoe, 1999). Thus, pediatric medical professionals spend far less time ameliorating illnesses caused by infection and more time helping parents and children to shape health and other types of child behavior.

In summary, on the pediatric side, the traditional and formerly dominant medical model of disease, which conceptualizes disease as a deviation from normative biological functioning, is being replaced by medical models that address social, psychological, and behavioral dimensions of disease (Engel, 1977; Tinsley & Parke, 1984). In addition, developmentalists' past concentration on behavioral models that give little explicit recognition to biological factors is diminishing. Practitioners in the fields of both pediatrics and child psychology demonstrate concern with the effects on health and development of psychosocial and behavioral factors.

With the development of this new interest on the part of medical professionals in children's health attitudes and behavior, and of social scientists in child health, has come a substantial increase in research on children's health attitudes and behavior. For those who are interested in the factors influencing children's health (e.g., for preventive or ameliorative purposes), this emerging model will be useful for specifying nonbiological correlates and causes of children's wellness and illness.

Mechanisms

The mechanisms of children's health-related attitudes, and of behavior acquisition and socialization, have been the focus of theoretical and empirical attention. Two issues have been explored. First, what familial or other social environmental conditions provide the opportunity for the acquisition of attitudes or behaviors that are necessary for child wellness? Second, what are the mechanisms that facilitate the acquisition and socialization of these attitudes and behaviors? As will be presented in this book, the research, to date has focused on several possible factors that may be involved in explaining childhood health socialization. In studies of child health attitudes and behavior, the explanatory burden has fallen on three categories of variables: (1) the child's background and characteristics (i.e., developmental status, demographics, personality variables,

and possibly gender), (2) extrafamilial agents (peers, schools, media), and (3) the parents' and family's relational and interaction variables.

The most common and well-researched way in which children learn about health is through familial relations. The research suggests that parents and families provide models of health attitudes and behavior, demonstrating, teaching, and reinforcing specific health attitudes and behavior, as influenced by background characteristics such as demographics and parents' personality variables (Garralda, 2000). Children are hypothesized to learn concepts of health and health skills as a result of repeated opportunities for practice of these behaviors in the home. Evidence suggests that these concepts and skills are utilized by children, as they get older, in other health behavior–eliciting situations, such as with friends and in school. Exposure to these alternative contexts serves to modify these health attitudes and behaviors. Nevertheless, the research indicates that children's health attitudes and behaviors appear to be more similar than dissimilar to those of their parents (Wiehl & Tinsley, 1999).