Chapter 1
Introduction

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In the past decades, the complexity and sophistication of treatments for diabetes has increased dramatically (Garber et al., 2015). Despite these advances, however, many people with diabetes continue to have less than optimal metabolic control and suffer from preventable complications and reduced quality of life (Bagnasco et al., 2014; Inzucchi et al., 2015). This gap between optimal, evidence-based medicine, and actual clinical practice illuminates the central role of the patient in implementing optimal management plans in daily life. The increasing awareness that patients' play a central role in achieving optimal outcomes has also given rise to the understanding that self-management is vastly more complex than the individual exercising "self-control." In addition to individual characteristics, the social, physical, and political environments in which behaviors occur have great influence on how persons manage their diabetes. Indeed, family and peer dynamics, access to different modes of health care, barriers in the workplace, and national health policies all contribute to diabetes outcomes. For patients and clinicians, these ecological factors create the context in which behaviors occur. This awareness highlights the importance of patient supported approaches to achieving optimal diabetes outcomes (Inzucchi et al., 2015).

This interplay between the individual and the context in which he or she behaves has shifted in important ways over the past few decades. Previously, we thought that simply providing information about "best" treatment strategies would change health care and health behaviors. It was widely held that all that was necessary to change clinical practice was to inform doctors of the reasons or research behind recommendations and that changing individual health behavior was a simple matter of explaining the importance of performing specific actions and then patients would readily comply with those recommendations (Lorig & Holman, 2003; Steed, Cooke, & Newman, 2003).

Achieving behavior change in the clinical setting is not such a simple matter (Delamater, 2006). In the later decades of the twentieth century, the view of clinicians and patients as obedient adopters of facts and recommendations was replaced by two, somewhat divergent viewpoints: those emphasizing characteristics of the individual versus those emphasizing the role of the broader contexts of economics, communities, organizations, cultures, and policies (Marrero et al., 2013). Psychosocial therapies for individuals with diabetes have benefited from this latter view (Delamater et al., 2001). In this

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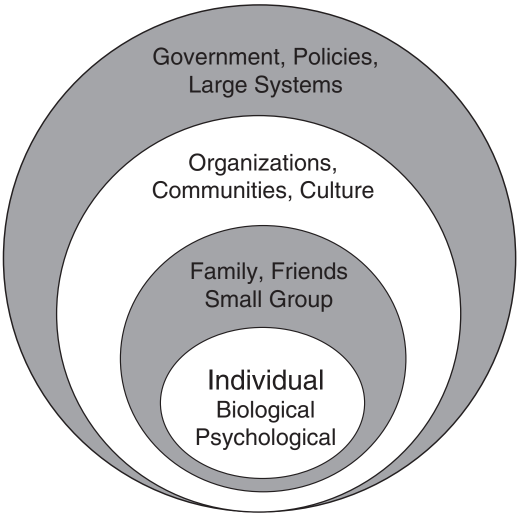

Fig. 1.1 Ecological model of health behavior

context, this book examines the synthesis of individual and context using a social ecological perspective and explores implications and lessons for clinical practice and development of improved approaches to promoting engagement in diabetes care, effective diabetes self-management, and quality of life among those pediatric and adult populations with diabetes. This is consistent with the recommendations of professional diabetes organizations such as the International Society of Pediatric and Adolescents Diabetes and the American Diabetes Association, which have both published guidelines for the psychosocial care of individuals with diabetes (Delamater et al., 2018; Young-Hyman et al., 2016).

To help structure this discussion, we have elected to use the social ecological framework for understanding how a range of broad contextual factors interact and influence individuals and their behaviors (Bronfenbrenner, 1979; Glanz et al., 2008). As shown in Fig. 1.1, in the ecological model of health behavior (Fisher et al., 2002), the individual (both psychological and biological aspects) operates within the context of family, friends, and small groups, which are in turn, embedded within several layers of larger social contexts.

Just as people influence their families and are influenced by them, families influence communities and vice versa. How communities can facilitate or inhibit diabetes management are in turn influenced by government policy, cultures, and overall society. Thus, an important principle of the social ecological model is that factors at different levels influence each other, and these inter-level influences are often reciprocal. It allows us to understand the range of factors that put people at risk for negative and positive outcomes associated with diabetes self-management. The overlapping rings in the model illustrate how factors at one level influence factors at another level.

Besides helping to clarify these factors, the model also suggests that in order to improve health outcomes, it is necessary to consider and act across multiple levels of the model at the same time. This approach is more likely to sustain prevention and treatment efforts over time than any single intervention.

How this Book Is Organized

Using the social ecological model, we define key issues at each level for both pediatric and adult populations with diabetes, since the issues they experience are different, focusing on different developmental and contextual factors. Thus, there are parts that focus on the individual, the social/family level, the community level including health-care systems, and finally the policy level. Each part presents research findings on the current state on knowledge and what interventions have been used to address the issues.

The first main section of the book begins with chapters that focus on children and adolescents (Parts I through VI), starting with a chapter that updates the epidemiology and current strategies for pediatric medical management. We then explore *individual-level factors* with chapters on the biobehavioral and neuroendocrine influences on development of diabetes in children; distress and quality of life; depression and anxiety; eating disorders; the effects of diabetes on neurocognitive function; and individual-level intervention approaches.

Consideration is then given to *social-level factors* with chapters on family influences; the role of peer support; social-level intervention approaches with an emphasis on family therapies; and enhancing peer support and coping.

We then review *community-level factors*, with chapters discussing demographic influences and health disparities; the impact of medical systems and patient-provider relationships and transition of care to diabetes outcomes; and diabetes prevention in communities and schools. Finally, we focus on *policy-level factors* with a discussion on how health care, insurance, and school policy affects diabetes management. The section on children and adolescents concludes with a discussion of main research findings and implications for clinical practice and research.

The second section of the book focuses on *adults* with diabetes (Parts VII through XII). It also begins with a chapter that updates the epidemiology and current treatment of adults. We then explore issues at the *individual level* that include biobehavioral factors in the etiology of diabetes; distress and quality of life issues; depression and anxiety; eating disorders; neurocognitive function; and individual-level intervention approaches.

Social-level factors are then explored with chapters discussing the role of family and peer support; social-level interventions with an emphasis on family-based therapies; and social-level interventions including enhancing peer support. This is followed by chapters discussing *community-level factors*, including demographic influences and health disparities; the influence of medical systems and patient-provider relationships; and the social-community-level context of weight loss interventions and diabetes prevention.

We conclude this section of the book on adults with consideration of *policy-level* factors. The focus here is on how health care and insurance policy affect diabetes management. The section on adults concludes with a discussion summarizing the main findings and their implications for clinical practice and research.

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