
CHAPTER 1

Overview of the Field of Pediatric Psychology

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As the phrase implies, “pediatric psychology” is an amalgam of clinical applications and psychological science with the medical and health problems of children, adolescents, and their families, all within the context of collaborations with health care providers. The practice specialty of pediatric psychology developed primarily to fill unmet needs that became increasingly apparent and noticed by medical professionals. Pediatric and family physicians were and are confronted with a range of health and behavioral problems that require an integrated medical–psychological approach to treat comprehensively and effectively (Roberts, 1986). This chapter provides an overview of clinical practice within pediatric psychology, including a brief history, important theoretical models used in practice, main features of practice, innovations, and training issues.

HISTORY OF PEDIATRIC PSYCHOLOGY

Considerable changes in pediatric practice were associated with the decline of infectious diseases that had often resulted in impairment and death in the 1950s and 1960s. Improvements in mortality and morbidity were achieved

through advances in immunization, improved sanitation, and disease control. In addition, improved medical treatments dramatically increased survival for life-threatening illnesses. Thus, as the types of patient cases presenting in pediatric practice changed, medical services and hospital-based policies correspondingly changed to accommodate the new needs. Specifically, professionals increasingly recognized that their patients were more often presenting with emotional and psychological problems in both outpatient and inpatient settings.

Historically, pediatricians and professional psychologists in independent practice settings could not fully meet the needs of children and their families within their traditional frameworks, experiences, and training backgrounds. Importantly, the health care professional usually had inadequate training to competently manage these issues and insufficient time in daily practice to devote proper attention to them. These psychological, developmental, behavioral, educational, and child management issues challenged physicians and nurses both to identify and then to treat them, with a lack of adequate referral and follow-through to psychological practitioners. However, when children and families were referred out of the medical practice and served in more traditional mental health clinics, such as child guidance clinics or outpatient psychiatric clinics, the patients would have been altered, with changes in perceptions, behavior, responses, and motivation, in the process of being interviewed, diagnosed, and referred to another agency or professional (Roberts, 1986; Walker, 1979). Pediatricians needed direct access for their patients to psychological services; psychologists sought to provide more accessible and effective services for children, adolescents, and their families.

In an evolution during the 1960s, a “new marriage” was proposed for psychology and pediatrics (Kagan, 1965), which was eventually strengthened over time based on mutually beneficial interactions developing through both individual collaborations and systemic relationships. The “marriage” of pediatrics and psychology is now not so new; nonetheless, as a field of integrated practice, this relationship retains some of the vibrancy of its development and creative concepts, with a continual growing together as the “marital” arrangement matures.

Logan Wright, one of the recognized founders of pediatric psychology, defined the field as dealing “primarily with children in a medical setting which is nonpsychiatric in nature” (1967, p. 323). A closely related definition in the *Journal of Pediatric Psychology (JPP)* masthead indicated:

The field and the contents of this Journal are defined by the interests and concerns of psychologists who work in interdisciplinary settings such as children’s hospitals, developmental clinics, and pediatric or medical group practices.

A more comprehensive articulation was described in a revised mast-head statement of *JPP* in 1988 that moved beyond the setting-based definition to advance the field to include a more expansive range of issues and activities:

Pediatric psychology is an interdisciplinary field addressing the full range of physical and mental development, health, and illness issues affecting children, adolescents, and families . . . wide range of topics exploring the relationship between psychological and physical well-being of children and adolescents including: understanding, assessment, and intervention with developmental disorders; evaluation and treatment of behavioral and emotional problems and concomitants of disease and illness; the role of psychology in pediatric medicine; the promotion of health and development; and the prevention of illness and injury among children and youth.

As currently conceptualized, pediatric psychology integrates the traditional bases of scientific foundations and applied practice of psychology with the issues and settings of pediatric health. As such, professionals utilize evidence-based methods that have been developed within a scientist-practitioner orientation to enhance health and development of children and adolescents. Areas of its clinical science and applications include the assessment of and intervention for (1) psychological and developmental conditions that influence the occurrence of and recovery from pediatric medical disorders and (2) the behavioral and emotional concomitants of injury, disease, and developmental disorders. The field of pediatric psychology encompasses a multitude of activities that promote health and prevent or control disease and injury. Parts of pediatric psychologists' activities are oriented not only toward the education and nurturing of psychologist trainees but also toward training other health care providers and professionals. In addition to advocating for and working with patients to improve their health behaviors, pediatric psychologists advocate for the improvement of health care systems, such as enhancement of the organization and delivery of services for children and for changes in societal conditions that impede the fulfillment of children's development.

The Society of Pediatric Psychology (SPP) recently formulated a more concise "mission statement" to capture the purposes of the organization and its members:

SPP aims to promote the health and psychological well-being of children, youth and their families through science and an evidence-based approach to practice, education, training, advocacy, and consultation. (Palermo, 2012, p. 1)

An even more concise “vision statement” for the organization called for “healthier children, youth, and families” (Palermo, 2012, p. 1). Although these statements do not define the field per se, they do convey the focal points of the practice of pediatric psychology and its health-oriented scientific approaches and move away from the earlier setting-based definitions offered in the *JPP* masthead statements.

Formal definitions of the field notwithstanding, what really defines a field are the activities of those who work as practitioners and clinical investigators: “Despite all the verbiage that can be written defining pediatric psychology practice, one characteristic more than anything else defines the field—the types of cases evaluated and treated by the pediatric psychologist” (Roberts, 1986, p. 19). As is shown in the cases presented in later chapters of this book, pediatric psychologists provide (1) psychosocial services for issues related to pediatric health conditions (e.g., fostering coping and adjustment to the diagnosis of a chronic illness, improving adherence to a medical treatment regimen, pain management, school reintegration); (2) psychological services for mental health problems appearing in medical settings along with a pediatric problem (e.g., behavioral disobedience after hospitalization); (3) assessment and treatment for psychological problems presenting in a medical setting without a concomitant medical condition (e.g., through primary care referrals for attention-deficit/hyperactivity disorder [ADHD]); (4) programs for health promotion, disease and injury prevention, and early intervention; (5) assessment, intervention, and programming to improve functioning for children and adolescents with intellectual and developmental disabilities; and (6) advocacy for public policy supporting children and families and promoting public health advancements. There are two conceptual frameworks that commonly inform and drive pediatric psychology clinical practice.

CONCEPTUAL FRAMEWORKS

Developmental Perspective

Given the focus on children and adolescents, pediatric psychologists apply a developmental perspective to their work and must recognize the rapidity and extensiveness of the changes occurring in children in terms of their physical, cognitive, psychological/emotional, and social abilities and functioning. This developmental orientation helps to determine (1) changes to expect over time and as comparison for tracking when development goes awry; (2) intervention and prevention services that might be most needed and for certain presenting problems; and (3) psychological services that might be offered to maximize appropriate return to functioning (Jackson, Wu, Aylward, & Roberts, 2012; Roberts, 1986; Spirito et al., 2003).

Biopsychosocial Model

Many pediatric psychologists explicitly orient toward the biopsychosocial model built on the social ecology model of Bronfenbrenner (1979; see also Spirito & Kazak, 2006, and Wu, Aylward, & Roberts, Chapter 3, this volume). This model considers the multiple elements that influence child development in general and that specifically affect how the child and family might adapt to changes in psychological and physical conditions. For example, if a child has a chronic illness, this social ecological model articulates the numerous systems surrounding the child depicted in a series of concentric rings surrounding the individual child or adolescent. The microsystem, closest to the child, would include the illness, parents, and other family members. Expanding outward, the mesosystem includes peers, schools, and the medical settings and staff. The exosystem involves the parents' social networks, culture and social class, religious institutions, and social services (see Figure 43.1 in Steele & Aylward, 2009). This model indicates points at which psychosocial interventions might be made for children with pediatric conditions at multiple levels within the multiple systems. A biopsychosocial perspective enhances the pediatric psychologist's recognition of the systemic influences and complexity of factors surrounding a child who is learning to live with and manage a medical condition.

As a corollary to this model, over the years, several changes may be observed in the practice aspects of the pediatric psychology field. These include movement from an orientation that assumed that a child with a chronic medical condition would have, or would be at high risk for, deficits in psychosocial functioning to a model that focuses more on strengths and resilience in finding how children and their families cope and adjust and how to help those who are experiencing difficulty move to improved functioning.

PEDIATRIC PSYCHOLOGY SETTINGS FOR PRACTICE

The settings in which pediatric psychologists conduct these activities are similarly diverse, including (1) medical outpatient clinics with pediatricians or family medicine physicians in primary care, such as private practices and clinics attached to medical centers and children's hospitals (these could include general pediatrics practice); (2) inpatient units in children's hospitals for initial diagnosis and intensive treatment (these could be specialty units for cancer treatment or a general ward); (3) psychology or interdisciplinary outpatient clinics and child guidance clinics (e.g., for emotional and behavior problems associated with medical conditions or

independently presenting in primary care, services for children with developmental disabilities); (4) specialty facilities, clinics, and centers for specified conditions (e.g., intellectual disabilities, epilepsy); and (5) community support agencies and groups (e.g., summer camps for children with specific conditions, such as cancer, sickle cell disease, and diabetes). The various types of settings of pediatric psychology practice are illustrated in the different case descriptions throughout the book (see especially Lassen, Wu, & Roberts, Chapter 2, this volume).

CHARACTERISTICS OF PEDIATRIC PSYCHOLOGY PRACTICE

The greatest number of pediatric psychologists practice in hospitals or medical institutions, even though more pediatric patients are seen for general health care in outpatient or primary care settings. This is likely a result of available financial reimbursement practices for psychologists in institutions. Across settings, factors influencing psychologists' practice include the nature of pediatric practice in offices and hospitals and differences in training, orientation to diagnosis, and terminology between medical and psychology providers (Roberts, 1986). Other chapters in this volume illustrate the practice setting differences, for example, Chapters 2 (Lassen et al., on common concerns and settings); 5 (Carter, Thompson, & Thompson, on pediatric consultation-liaison in the children's hospital); 6 (Stancin, Sturm, & Ramirez, on primary care practice); and 7 (Conroy & Logan, on multidisciplinary and interdisciplinary teams). All of the chapters in this volume concerning clinical problems and the case examples similarly describe the various practice parameters. For example, whether in outpatient or inpatient settings, medical practice is more fast paced than many traditional professional psychologists are accustomed to experiencing, and it influences the nature of pediatric psychology practice (Roberts, 1986). For example, there are increasing requirements that, for financial reasons, physicians and other medical providers see larger numbers of patients in a day, often with limited time per patient. Further, an office-based practitioner may see a diversity of presenting problems, including well-child visits, visits for episodic illnesses, follow-up care for a chronic illness, and visits focused on child behavior concerns. In addition, medical providers and psychologists differ in the training they receive. For instance, broadly speaking, whereas medical providers receive extensive training on understanding and diagnosing the medical and biological underpinnings of presenting problems, along with their associated medical diagnoses, psychologists receive extensive training on understanding the psychosocial influences on presenting problems along with the associated psychological diagnoses. In

addition, psychologists typically receive more training than their medical colleagues on managing the interpersonal and psychosocial challenges with which children and their families present.

The pediatric psychologist often must adapt to fit the medical practice model through brief interventions with child and caregiver. Psychological assessment and interactions with patients and the physician correspondingly need to be economical and time efficient. Consultations with the health care provider are typically brief and targeted to the most important considerations. Extensive diagnostic workups are therefore not as valued in pediatric practice. Targeted and to-the-point psychological reports are more likely to be read and utilized than are lengthy, esoteric reports presenting large amounts of psychological jargon. Pediatric psychology reports typically are action-based communications about what was found in the consultation and recommendations for parents, for the physician, and for the psychologist about addressing the referred issues. Any reports by necessity indicate the problem and the referral question, with a brief exposition of what was assessed and the results, and they place the greatest emphasis on what is recommended. Consequently, the quick-paced nature of medically related work requires modifying well-trained assessment and psychological report-writing skills. In addition, successful partnerships between medical professionals and pediatric psychologists often require both sides to be willing to accept and endorse a biopsychosocial approach to assessment, case conceptualization, and treatment.

In response to the demands for efficient and effective interventions, particularly in medical settings, the pediatric psychologist also likely employs briefer interventions. Behavioral and cognitive-behavioral strategies are frequently implemented. These interventions typically have a stronger evidence base, are more demonstrably effective, can be targeted to specific clinical problems, and can be implemented by a variety of caregivers than more traditional psychiatric or psychological therapies. Beyond the interventions themselves, pediatric psychologists must use a variety of necessary clinical skills, including establishing rapport and providing support and empathy.

A variety of theoretical approaches are being developed to meet the needs of the pediatric psychologist's patient population, including with motivational interviewing (Hilliard, Ramey, Rohan, Drotar, & Cortina, 2011; Jensen et al., 2011) and acceptance and commitment therapy (Masuda, Cohen, Wicksell, Kemani, & Johnson, 2011). Often, the application of existing therapy techniques to a pediatric psychology population is made in the context of clinical case studies that might later be developed through more systematic evaluations of effectiveness. Historically, pediatric psychologists have demonstrated a pragmatic eclecticism that invokes innovation and an attitude of "if it works, use it."

Evidence-based practice in pediatric psychology clearly relies on clinician judgment about the applicability of empirically supported treatments and careful observations of effectiveness applied to individual patients. Psychologists are expected to solve problems, as do most medical professionals, with an emphasis placed on observable or measurable outcomes, not ill-defined or nebulous results. Indeed, in many situations, successful outcomes are readily observable. For example, a child with a feeding disorder starts eating and gaining weight, a child with encopresis gains continence and decreases frequency of soiling, a child with diabetes learns to increasingly monitor exercise and nutrition to improve in adherence to the medical regimen, or a reduction in pain symptoms occurs for a child with sickle cell disease after a psychological intervention. In pediatrics and, concomitantly, in pediatric psychology, there is an emphasis on demonstrable effectiveness and an orientation to practical interventions and accountability for results. Duncan and Dempsey (Chapter 4, this volume) provide more information on financial issues and outcomes for reimbursement.

ADVANCES AND INNOVATIONS

Early research in the field described the types of presenting problems, the characteristics of children and families with different medical conditions, and the psychological sequelae to these conditions. For example, Wright described the intellectual sequelae of meningitis and Rocky Mountain spotted fever (Wright, 1972; Wright & Jimmerson, 1971). Lee Salk, another founder of the field, described the psychological impact of hemophilia on pediatric patients and their families (Salk, Hilgartner, & Granich, 1972). Similarly, much of the research published in *JPP* would be categorized as primarily descriptive or “explicative” (Roberts, 1992; Roberts, McNeal, Randall, & Roberts, 1996). Explicative research includes examinations of relationships among the various measures of psychological and pediatric variables in order to produce a comprehensive view of the factors related to medical or psychological conditions. Studies with an explicative purpose, for example, have considered the relationship of coping responses of children with pediatric conditions (e.g., sickle cell disease, cancer, diabetes, spina bifida) and family members’ adjustment to having a child who has a chronic illness. A few of these descriptive studies have directly led to clinical interventions for the pediatric psychologist or medical staff to implement. However, Tercyak et al. (2006) indicated that this descriptive work serves as early-phase research, with later phases making the application for clinical practice. *JPP*, published by the SPP, is a significant resource in terms of the scientific base for knowledge in the field; the SPP has now

embarked on a new publication, *Clinical Practice of Pediatric Psychology*, published in conjunction with the American Psychological Association, to fulfill the practice needs of professional pediatric psychologists with attention to applications in the various types of practices and settings.

The founders of the field created many new treatments and evaluated these innovative interventions because they were often faced with challenging cases that presented in pediatric settings. For example, as a pioneer in practice and in documenting what was effective in pediatric psychology, Logan Wright described devising a successful intervention for helping wean children off of their “addiction” to breathing through tracheotomy cannula, a situation that previously produced a high mortality rate (Wright, Nunnery, Eichel, & Scott, 1968, 1969). He also developed and evaluated treatment for children’s refusals to swallow liquids or solids (Wright, 1971), for a child’s self-induced seizure (Wright, 1973a), and for encopresis that had been ineffectively treated to that time (Wright, 1973b, 1975; Wright & Walker, 1976). Many treatments have become well established with empirical research and clinical applications.

Innovation is still important and necessary today in pediatric psychology practice. Currently, for instance, interventions such as using telehealth and technology devices are being developed and tested. As examples of these developments, a CD-ROM has been used to present an intervention for recurrent pediatric headaches (Connelly, Rapoff, Thompson, & Connelly, 2006). A Web-based program for HIV-positive youth has been found to enhance adherence to antiretroviral therapy (Shegog, Markham, Leonard, Bui, & Paul, 2012). Electronic monitoring of medication adherence through recording chips on medicine bottle caps has been used in multiple applications (Maikranz, Steele, Dreyer, Stratman, & Bovaird, 2007). Smartphones and other electronic devices now provide the technology to engage pediatric patients by prompting and recording behavior, to implement psychosocial and educational interventions, and to provide feedback on performance (e.g., Hilliard et al., 2011; McClellan, Schatz, Puffer, Sanchez, Stancil, & Roberts, 2009). Thus, consistent with the innovative foundations of pediatric psychology, the field continually advances.

EDUCATION AND TRAINING FOR PEDIATRIC PSYCHOLOGY

No single path of preparation seems to have defined the pediatric psychologist in the United States in the past. Increasingly, however, the emerging model seems to be one of education and training in professional psychology within the specialty of clinical child and adolescent psychology focusing

on pediatric psychology. There are no accreditation requirements or legal restrictions for practice in pediatric psychology other than the license for practice in psychology and, in some settings, gaining hospital privileges. Some hospitals also require that staff psychologists obtain board certification (viz., through the American Board of Clinical Child and Adolescent Psychology; Finch, Lochman, Nelson, & Roberts, 2012).

Nonetheless, recognizing the special expertise (knowledge, attitudes, and skills) that is required of the pediatric psychologist, the SPP formed a task force to articulate the training domains for the field. The 12 domains outlined by Spirito et al. (2003, Table 1) for the specific field of pediatric psychology were adapted from the categories of preparation and training presented by Roberts et al. (1998) for psychologists working with children and adolescents. These pediatric psychology domains are (1) lifespan developmental psychology; (2) lifespan developmental psychopathology; (3) child, adolescent, and family assessment; (4) intervention strategies; (5) research methods and systems evaluations; (6) professional, ethical, and legal issues; (7) diversity; (8) the role of multiple disciplines in service delivery systems; (9) prevention, family support, and health promotion; (10) social issues affecting children, adolescents, and families; (11) consultation and liaison roles; and (12) disease process and medical management (Spirito et al., 2003, p. 92).

Spirito et al. (2003) elaborated these domains to include children's development and the process of disease and effects of medical treatments, applications of psychological principles, and empirically supported assessments and treatments in child health psychology in medical settings. The report outlined the need for specialized scientific strategies as applied to pediatric psychology topics, such as through the psychologists' involvement in clinical trials for medical concerns, research into health services delivery systems such as multidisciplinary teams, consultation–liaison, and primary care. The pediatric psychology trainee at multiple levels of preparation also needs to gain an understanding of both healthy and atypical development, risky health activities, diseases and medical treatment regimens, and biopsychosocial interventions that can prevent problems that may carry over into the child's adulthood. These types of issues are illustrated throughout the following chapters in this book and the cases described. The American Academy of Pediatrics (1992) advocated (and continues to do so) for the development of a medical home for the child patient and family in which the “medical care of infants, children, and adolescents ideally should be accessible, continuous, comprehensive, family-centered, coordinated, and compassionate” (p. 774). The pediatric medical home also incorporates the concept that both medical and nonmedical needs of the child and family are given attention. The concept of a pediatric medical home is inherently part

of the integrated health care movement within current health care reform, which has called for patient-centered medical homes (Long, Bauchner, Sege, Cabral, & Garg, 2012; see also Lassen et al., Chapter 2, this volume). These concepts, when implemented correctly, can lead to improved quality and coordinated care (Beacham, Kinman, Harris, & Masters, 2012; Kleinsorge, Roberts, Roy, & Rapoff, 2010; Long et al., 2012; Pidano, Kimmelblatt, & Neace, 2011).

Importantly, the pediatric psychologist has (and will have) a significant role in the implementation of medical home and integrated care concepts. As can be seen in these domains and medical concepts, there is an inherent focus on the systemic issues in the biopsychosocial model, with attention to the special situations posed in pediatric settings presenting with patients with medical conditions. The trainee preparing for a career in pediatric psychology needs to develop a specialized knowledge base, skill set, and professional functioning. Health care reform (as represented by the Affordable Care Act) will influence future developments in pediatric psychology (Rozensky, 2011; Rozensky & Janicke, 2012; Roberts, Canter, & Odar, 2012). The encompassing concepts and definition of “health service psychology” will be inclusive of all specialties and subfields, importantly including pediatric psychology, with implications for training, professional functions, and reimbursement (Health Service Psychology Education Collaborative, 2013).

CONCLUDING REMARKS

The field of pediatric psychology has not just survived through the years but has thrived. Starting with an initial set of 75 psychologist members, the SPP now has approximately 1,600 members with very active scientist-practitioners in a range of settings from university research and training settings to children’s hospitals and major medical centers to independent and group practice with pediatricians and family medicine physicians. The maintenance and growth of this field in a relatively short period of time can be traced to the value attributed to the concepts and psychological applications in meeting the multiple needs of children in the medical setting with a set of complex problems requiring interdisciplinary collaborations. The expansion of pediatric psychology practitioners and scientists throughout the United States and internationally has been propelled by the well-received effectiveness of pediatric psychologists as individual practitioners interacting with patients and medical personnel and of pediatric psychology as an integrative field collectively demonstrating the worth of its practitioners’ knowledge and skills.

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