

A Frame of Reference to Enhance Childhood Occupations: SCOPE-IT

KRISTINE HAERTL

Children construct their individual and collective identities through occupational engagement. Preparing for school, playing baseball with friends, reading a book, and cooking with a parent all represent activities and occupations used to create the self through daily experiences. Consideration of how children create and interpret their worlds is crucial to the understanding of development and childhood occupations (Lawlor, 2003).

The understanding and therapeutic application of occupation has been central to the core of occupational therapy since its inception. In 1917, the National Society for the Promotion of Occupational Therapy, the preceding professional association to the American Occupational Therapy Association (AOTA), emphasized the importance of “curative occupations” in the therapeutic application of occupational therapy (AOTA, 2007). Although the importance of occupation is emphasized throughout our profession, each theoretical model and frame of reference has its own emphasis, yet the concept of occupation is not always the primary focus in the application of every frame of reference. As emphasis on the therapeutic value of occupation has reemerged in recent years (AOTA, 2002; Cottrell, 2005) occupation-based theoretical models and frameworks have been developed for occupational therapy intervention throughout the life span (e.g., Christiansen & Baum, 1997; Dunn, Brown, & McGuigan, 1994; Kielhofner, 1983a). Within the frame of reference to enhance childhood occupations, the primary focus is on the unique relationship between the person, environment, and occupation. The focus is on occupation as the primary means and ends to therapy. This chapter outlines the application of one particular occupation-based theoretical model, the SCOPE-IT model (Poulsen & Zivani, 2004a,b) to pediatric practice. Underlying assumptions of this frame of reference are discussed, along with the theoretical base, and a framework for applying SCOPE-IT to occupational therapy evaluation and intervention.

THEORETICAL BASE

The work of pioneers such as Reilly (1962), Yerxa (1967), and Kielhofner (1983a, 1995) emphasize the importance of occupation as the foundation of our profession. Personal

interests, values, goals, skills, habits, and roles were viewed as integral to the occupations chosen and the resulting *occupational behavior* (Kielhofner, 1995). Adaptive *occupational behavior* is the outcome of an individual's ability to organize behavior in time with personally and culturally meaningful activities in areas such as work, rest, play, and self-care (Kielhofner, 1983b; Reilly, 1966). The frame of reference to enhance childhood occupations considers the child's growth and maturity in occupational engagement through the natural course of development (Figure 9.1). Children are viewed as developing dynamically through participation in daily activities. Person, environment, social, and cultural variables influence development and occupational behavior. *Occupation* is "culturally valued, coherent patterns of actions that emerge through transactions between the child and environment and as activities the child either wants to do or is expected to perform" (Humphry, 2002, p. 172). Occupational behavior changes over time and is influenced by genetic and environmental factors that naturally occur in the child's developmental process.

Occupational development is the progressive change that occurs in occupational behavior as a result of an individual's interaction with the environment over time (Wiseman, Davis, & Polatajko, 2005). Inherent within this definition are the influences of personal motivation, will, and social engagement. Characteristics of the person, environment, and occupational opportunities shape the course of occupational development through growth and maturation (Davis & Polatajko, 2004). Factors that influence change and occupational development include (1) community and caregiving practices



FIGURE 9.1 "I like to skip rocks because each time they can go farther" (Alex, age 9). These children demonstrate the quest for mastery during occupational engagement.

that create occupational opportunities, (2) the social and interpersonal transactions that surround activities, and (3) the self-organizing process that underlies occupational engagement (Humphry & Wakeford, 2006).

Within this frame of reference to enhance childhood occupations, the therapist takes on the role of facilitator of occupational engagement through use of *occupation as a means* to achieve the desired therapy outcomes, and *occupation as an ends* to maximize occupational performance of the child. *Occupation as a means* involves the use of occupation as a therapeutic agent to promote transformation of the person (Trombly, 1995), whereas *occupation as an ends* refers to the product of therapy and may include goals related to improving occupational performance. For instance, when treating Andy, a 13-year-old male with a recent L4 spinal cord injury, the therapist may capitalize on Andy's love of sports and use games involving the throwing and catching of balls to improve mobility and upper extremity strength (*occupation as a means*) in order to work toward Andy's expressed goal of playing wheelchair basketball (*occupation as an ends*). The therapist capitalizes on Andy's strengths and interests in using activities that are meaningful to him, to work toward the end goal of participating in adaptive sports. Additional methods used to achieve the occupational end goal may also include fitting Andy with a specialized lightweight wheelchair, and collaborating with Andy and his family to secure community resources that would help him achieve his goals.

Consistent with Deci and Ryan's self-determination theory (Deci & Ryan, 2000; Ryan & Deci 2000a,b) children are intrinsically driven to seek challenge, master and integrate experience, and work toward personal objectives. Self-determination theory emphasizes the important role of others in facilitating autonomy and reaching personal goals (Williams et al., 2006). Therefore, *motivation* is a key concept in the frame of reference to enhance childhood occupations. Work toward establishing autonomy through the child's engagement in activities involves collaboration with families, educators, and communities (Figure 9.2). Teachers and parents have been shown as effective mediators in facilitating engagement, autonomy, and motivation through use of behavioral feedback and personal support as well as through educating the child on the relevance of a particular task (Assor, Kaplan, & Roth, 2002; Assor, Roth, & Deci, 2004).

Assumptions

The frame of reference to enhance childhood occupations has six assumptions. Assumptions are consistent with the understanding of the study of occupation, as we have come to know it through the contributions of researchers in occupational therapy and occupational science.

- Children are occupational and social beings.
- The use of occupation is the underlying foundation of occupational therapy and is equally important both as a means and as an ends.
- Personal, environmental, social, cultural, and temporal factors influence occupational performance.
- Occupational development occurs through a dynamic process involving innate drives and guided participation.



FIGURE 9.2 “I like riding my bike because it takes me wherever I want to go!” (Cole, age 7, demonstrating the importance of autonomy in the development of a child).

- Engagement in occupation brings about change.
- Occupational engagement influences health and well-being.

Children are Occupational and Social Beings

The familiar sight of children running toward a playground illustrates the innate drive toward action that is perceived as meaningful and motivating for the child. Kielhofner (2002a) wrote, “whatever else characterizes being human—our spiritual yearnings, our capacity for love—we also share an innate occupational nature” (p. 1). Through interaction with the world, we maintain balance in our daily lives by active engagement and active use through time (Meyer, 1922). This frame of reference, which enhances childhood occupations, views the child as intrinsically motivated toward meaningful occupational engagement in a social world. Children are viewed as “socially occupied beings” (Lawlor, 2003, p. 424). Such engagement occurs in a context influenced by the sociocultural environment. Lawlor (2003) stressed that conceptualizations of the study of childhood occupations need to be framed in the understanding of children as socially occupied beings. Engagement with caregivers, peers, and therapists provide an emotional and social context by which children participate in occupation. The understanding of significant relationships (e.g., parents, peers, teachers, and therapists) and

their effect on the child is crucial to the foundations of occupation-based pediatric practice.

The Use of Occupation is the Underlying Foundation of Occupational Therapy and is Equally Important both as a Means and as an End

Occupation is relevant to the therapeutic process both as a *means* to serve as a change agent and achieve goals, and as an *end* goal of therapy (Trombly, 1995). Occupation as a means is viewed as a remedial approach to using purposeful activity to address goals. The use of occupation as a therapeutic agent should advance an individual toward an “occupational outcome,” one that provides meaning in the therapeutic environment (Gray, 1998). Such use of meaningful occupation serves as a catalyst to the healing and change process.

Occupation as an ends focuses on a therapeutic approach to achieve an occupational goal. The therapist who focuses on *occupation as an ends* may use a direct skill training approach to achieving an end occupational goal (e.g., dressing following a traumatic brain injury) or may use additional techniques (e.g., lifting weights to enhance function) in order to address underlying deficits to achieve the end goal. When focusing on occupation as the end goal, the means to achieve that goal should remain relevant, occupational, and meaningful; therefore, the focus on occupation is held throughout the therapeutic process from evaluation to intervention (Gray, 1998).

Personal, Environmental, Social, Cultural, and Temporal Factors Influence Occupational Performance

Occupational form is “the composition of objective physical and sociocultural circumstances external to the person that influences his or her *occupational performance*” (Nelson, 1988, p. 776). This form involves the contexts in which the occupation takes place. The focus is on the influence of personal and environmental factors on occupational performance. Environments provide occupational opportunities or barriers, in conjunction with social and cultural influences to structure the context of occupational engagement through time. An emphasis is on the interaction between the person and the environment and its influence on occupational performance. Each environment offers unique resources, opportunities, and constraints that interact with the individual’s values, interests, roles, habits, and performance capacities (Kielhofner, 1985, 1995, 2002b). It is critical to consider the unique influence of the environment on performance (Christiansen & Baum, 1991, 1997, 2004; Dunn, Brown, & McGuigan, 1994). Viewing individual abilities and life roles from a contextual perspective, the emphasis is on the inter-relationship between the person and environment and its impact on an identified potential “performance range” (Dunn, Brown, & McGuigan, 1994). Thus, context is a key variable in assessment and intervention in order to determine contextual opportunities and barriers and to identify personal goals within the performance range. For instance, a child may have the intellectual and musical capacity to be a great musician, yet if environmental barriers such as lack of adequate opportunities for instruction or lack of resources exist, then the child’s potential may not be met. Considerations are intrinsic factors such as psychological, cognitive, physiological, and neurobehavioral characteristics of an individual and the extrinsic environmental factors such as physical, cultural,

social, and societal influences (Law, Baum, & Dunn, 2005). The interaction between the person and the environment influences choice of time use and is affected by the developmental stage, chronological age, and period of time in which the occupational engagement occurs.

Occupational Development Occurs through a Dynamic Process Involving Innate Drives and Guided Participation

The study of occupation assumes that character and competence are formed through childhood occupations (Clark et al., 1991; Primeau, Clark, & Pierce, 1989). Historically, developmental theorists emphasized the innate drive toward active engagement and learning in children. Piaget stressed the importance of the child's inborn curiosity and drive toward active acquisition of knowledge, whereas Vygotsky emphasized the importance of an adult or mentor's role in facilitating learning through guided participation (Berger, 2004). This developmental process of learning and growth occurs through social and occupational engagement. A child's innate drives are occupationally driven and influenced upon by the environment (Clark et al., 1991; Humphry, 2002). Humphry stressed the reciprocal process of innate child factors, the drive toward occupational engagement, and the transactional time-specific process (Humphry, 2002; Humphry & Wakeford, 2006). Social influences of adult mentors affect occupational development as "experiences in occupation and influence of others' modeling, performance expectations, and assistance with difficult elements given equal importance as intrinsic changes" (Humphry & Wakeford, 2006, p. 259). The dynamic interaction between the child's curiosity and inner drive along with the cultural expectations and guided participation plays an integral role in occupational development.

The Engagement in Occupation Brings About Change

Consideration of the therapeutic process and product of occupation is integral to evaluation and intervention. The process of occupational engagement creates growth and change. The therapeutic value of occupation is a "change agent to remediate impaired abilities or capacities" (Trombly, 1995, p. 963). Yet the participation in occupation goes beyond remediation and facilitates a dynamic process that fosters change both in the individual and the environment. On the basis of the underlying assumption that occupational engagement creates change, use of a frame of reference to enhance childhood occupations identifies specific therapeutic aspects of occupation (e.g., through an activity analysis), in conjunction with client and environmental factors, and plans intervention in a systematic way to work toward identified therapeutic goals.

Adaptive Occupational Engagement Influences Health and Well-Being

The foundations of occupational therapy rest on the therapeutic influence of meaningful doing. Reilly (1962) asserted that "man, through the use of his hands as energized by his mind and will can influence the state of his own health" (p. 2). Thus, the personal occupational choices we make influence our present state of health and well-being. Occupational engagement is linked to health and survival (Wilcock, 1998). Given that survival is an innate drive, humans are intrinsically driven toward participation in activities to meet physical, mental, and social needs. On the basis of the premise

that occupational engagement brings about change, the frame of reference to enhance childhood occupations seeks to apply occupation in a therapeutic way in order to promote health and well-being. Further, there is a reciprocal relationship in that occupation influences health, and personal and societal health influences occupational participation and performance.

Synthesis of Child, Occupational, Performance, and Environment-In Time (SCOPE-IT Model)

The Synthesis of Child, Occupational, Performance, and Environment-In Time (SCOPE-IT model, Poulsen & Ziviani, 2004a,b) is based on Primeau and Ferguson's description of the occupational frame of reference (1999), as well as theoretical models that focus on the person, environment, and occupational performance; that is, Person–Environment–Occupation–Performance Model (Christiansen & Baum, 1997), Human Ecology Model (Dunn, Brown, & McGuigan, 1994), Model of Human Occupation (Kielhofner, 1997) (Figure 9.3). The occupational frame of reference according to Primeau and Ferguson focuses on enabling occupation through the use of client-centered practice. The emphasis of this frame of reference is improvement of occupational performance through maximization of the child–environment fit within

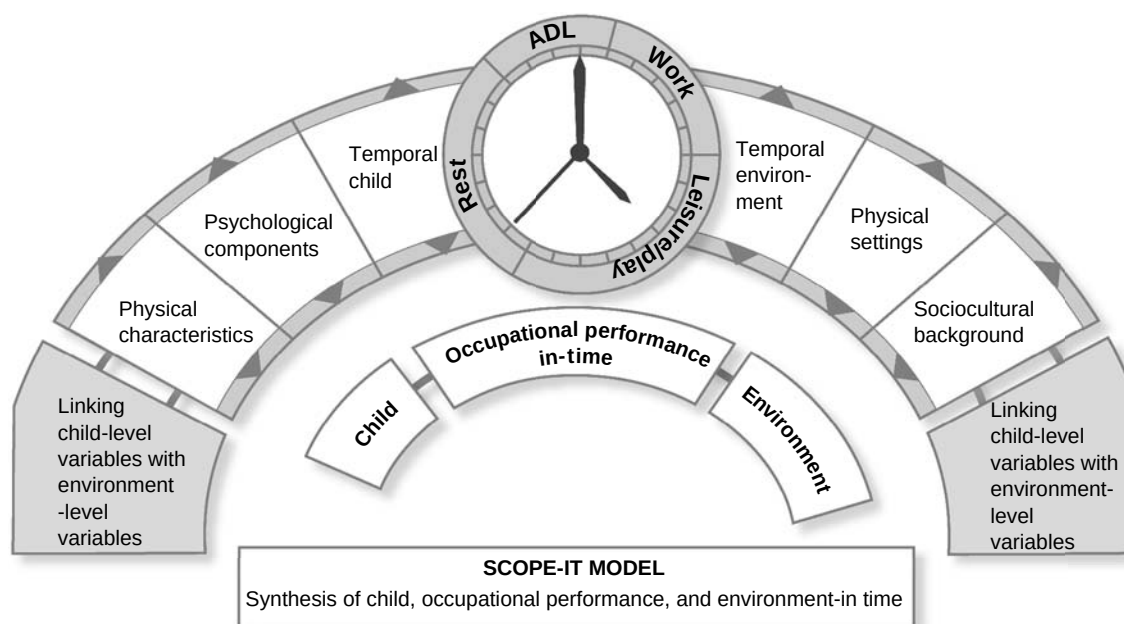


FIGURE 9.3 SCOPE-IT model. (Reprinted with permission from: Poulsen, A. A., & Ziviani, J. M. (2004). Health enhancing physical activity: factors influencing engagement patterns in children. *Australian Occupational Therapy Journal*, 51, 72.)

the scope of time. Within the frame of reference to enhance childhood occupations, the SCOPE-IT model emphasizes personal effort and choice as it is synthesized with child, environment, and temporal factors in order to influence occupational performance.

The SCOPE-IT model is pictorially symbolized as a watch band with a focal point of the face of the watch emphasizing balance of work, rest, activities of daily living (ADL), and leisure or play. In the center of the face, importance is placed on the individual's personal choice and effort in the temporal context of time.

The central concepts of the SCOPE-IT model, time, and occupation are based on Adolf Meyer's work emphasizing balance in the daily rhythms of life (Poulsen & Ziviani, 2004b). Occupational engagement, as measured quantifiably and qualitatively, considers how children structure time in daily life. The temporal context includes features of the individual (i.e., age, developmental stage, life cycle, and health status) as well as temporal features of the task (sequential structure, duration, when the task takes place, rate of recurrence, and structure) (Dunn, Brown, & Youngstrom, 2003). At the environmental level, physical, geographical, social, cultural, economic, occupational, and political factors influence the child's occupational performance (Kielhofner, 2002b; Pierce, 2003; Primeau & Ferguson, 1999). Consideration of the temporal and environmental contexts along with the child's physical and psychological characteristics helps the therapist design evaluation and intervention strategies aimed at overall improvement of occupational performance.

Health and Wellness Continuum

Health, wellness, and personal well-being are distinct but related concepts that underlie the occupational therapy process. The application of the frame of reference to enhance childhood occupations occurs along the health–wellness function/dysfunction continuum. Historically, the term *health* was rooted in the old English word “*heolth*” which typically referred to a sound state physically and denoted the condition of the body (Dolfman, 1973). Yet conceptualizations of health in recent years have become more holistic as health increasingly is equated with a state of well-being. Over a half century ago health was defined by the World Health Organization (WHO) as “a complete state of physical, mental, and social well-being, and not merely the absence of disease or infirmity” (WHO, 1946). This definition continues as the official definition of the WHO and affirms the connection between the state of the mind–body–spirit and personal well-being.

Concepts of health, wellness, and personal well-being are integral throughout the life span. Within the SCOPE-IT model, the facilitation of adaptive responses in the child and promotion of health satisfaction, well-being, efficacy, and quality of life are the desired outcomes of therapy. Subjective *well-being* includes an individual's perception of life, the presence of positive emotional states, and absence of negative ones (Diener, 1994). Diener et al. (1999) expanded this definition to include life satisfaction and personal satisfaction on specific life domains. Conceptualizations of well-being include various components including measures of satisfaction, balance, happiness, stress, and personal evaluation of the state of one's life (Kim-Prieto et al., 2005). When children are younger, although they are not of the developmental level to conceptualize ideas of personal well-being, their interactions with the environment, caregivers, and their occupations



FIGURE 9.4 “Playing in the sand is fun because you get to build things!!” (Andrew, age 7). These children spontaneously adapt the environment (sand volleyball court) to engage in building a sand castle.

influence personal identity, their sense of efficacy and mastery, satisfaction, and overall health (Figure 9.4).

A distinct but related term “wellness” is a state of being evolving through a process that occurs throughout the life journey (Jonas, 2005). This process involves personal choices that influence our state of health and life satisfaction. According to the National Wellness Institute (2007), wellness involves six dimensions including the following:

1. A person’s contribution to the environment, community, and how to build improved living spaces and social networks
2. Life enrichment through work and its connection to living and playing
3. The development of belief systems, values, and the creation of a worldview
4. The benefits of healthy choices including physical activity, healthy eating, health, strength and vitality, personal responsibility, self-care, and seeking medical attention when needed.
5. Self-esteem, self-control, and determination influencing life direction
6. Creative stimulating mental activities and sharing of personal gifts and talents with others

The engagement of healthy choices leads to improved personal wellness and may enhance quality of life. Starting from a very young age, parental influences, the sociocultural environment, and personal experiences influence a child’s personal choices related

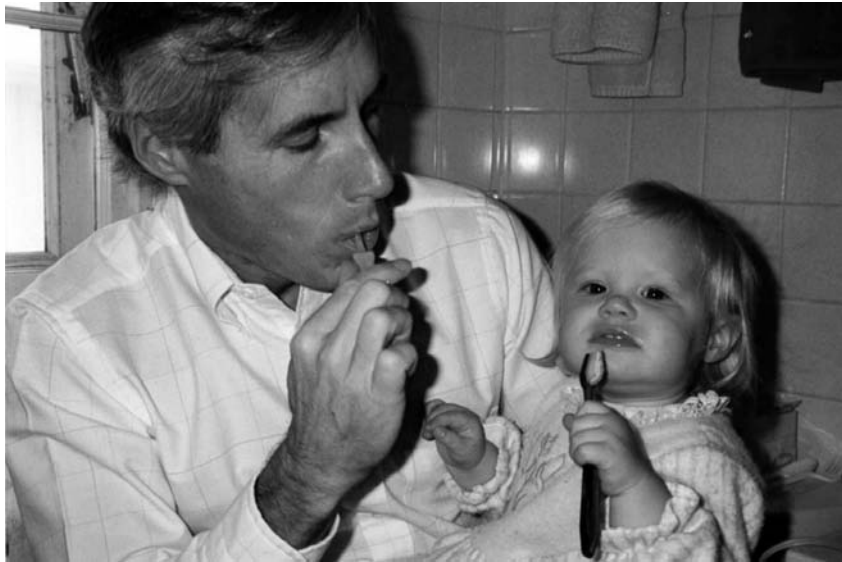


FIGURE 9.5 Parent–child interaction is integral to developing skills, values, and habits.

to health, wellness, and occupational engagement (Figure 9.5). Within the frame of reference to enhance childhood occupations, the therapist chooses occupational interventions aimed at engaging the child in meaningful activity to improve overall personal function, occupational performance, wellness, and life satisfaction.

Persons with chronic and severe illness can still have personal well-being and life satisfaction (i.e., Matthews et al., 2002; Mulkana & Hailey, 2001). For instance, an adolescent may have personal wellness in one of the dimensions (i.e., making healthy eating choices and maintaining good physical health) but may be lacking in other areas (i.e., strong social connections). The SCOPE-IT model views wellness more holistically to include concepts of effort, choice, and time as they create a unique rhythm within the child's occupational engagement in areas of rest, ADL, work, and leisure or play (Figure 9.6). Integrating concepts from the SCOPE-IT model along with the National Wellness Institute's (2007) dimension of wellness and Diener's (1994) emphasis on individual self-perception, a more holistic conceptualization of individual wellness and well-being should be dynamic, multidimensional, and applicable throughout the life span.

In a dynamic representation of well-being, all dimensions influence one another and contribute to an individual's overall health, wellness, and perceived well-being. Within the frame of reference to enhance childhood occupations, therapists work with children in all dimensions utilizing a client-centered focus and creating occupational opportunities for personal success and growth. Through use of meaningful occupations, the identified outcomes of the SCOPE-IT model aim to increase adaptive responses leading to health, satisfaction, sense of well-being, flow, efficacy experiences, quality of life, and a sense of identity (Poulsen & Ziviani, 2004b).

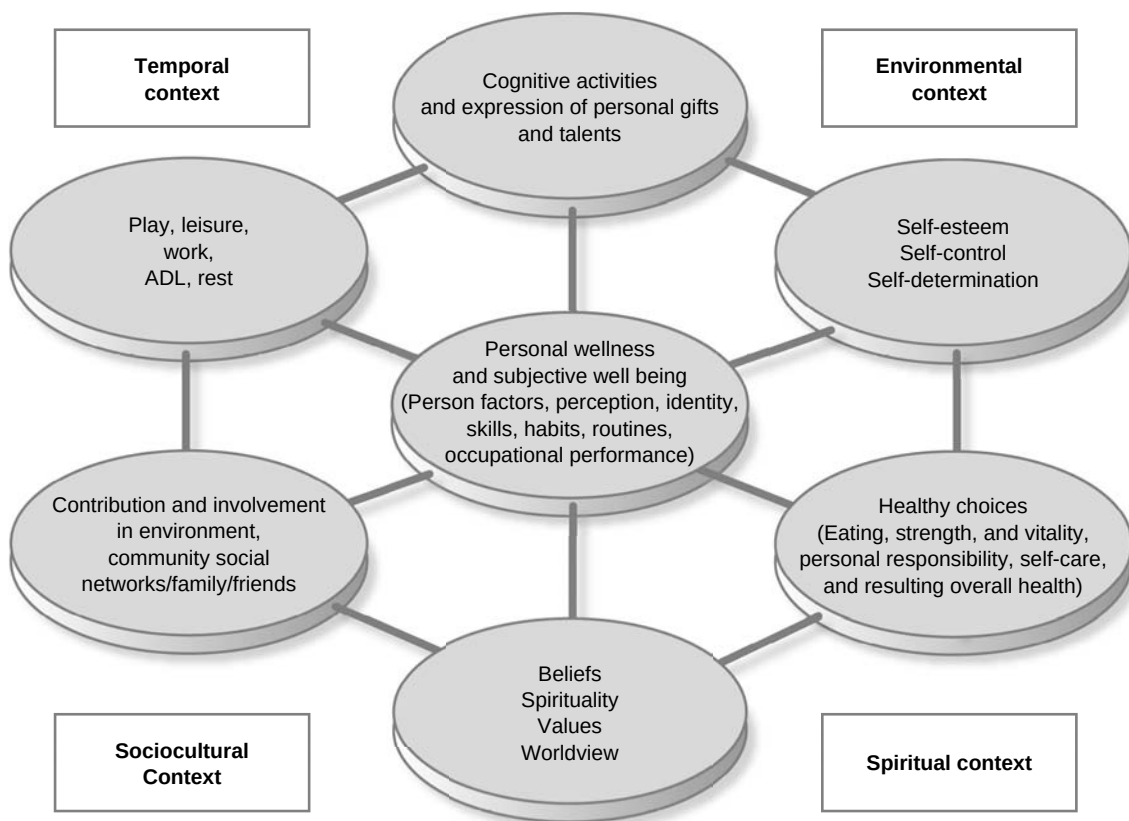


FIGURE 9.6 Dynamic representation of personal wellness and well-being.

FUNCTION–DYSFUNCTION CONTINUA

Within the spectrum of health and wellness, individuals move throughout life along a continuum of function–dysfunction in areas of occupational performance. Applying the SCOPE-IT model within the frame of reference to enhance childhood occupations, functional indicators are considered within the occupational performance areas of (1) work and productivity, (2) play and leisure, (3) ADL and self-care, and (4) rest and sleep. These are in no particular order and all are of equal importance. Human performance is not static; its complexity is dynamic and performance along each continuum ranges is based on the interaction of personal, environmental, and temporal factors. Occupational behavior may be functional in one set of circumstances, but not in another. Therefore, although the following charts indicate guidelines for function–dysfunction, it is important to remember the variability that occurs based on personal motivation, choice, effort, time, and environmental context.

Indicators of Function and Dysfunction for Work and Productivity

Although play is often referred to as the work of the child, there are several contexts in which children engage in productive work behaviors. Household chores, schoolwork, and beginning vocations as an adolescent all fall under the category of work. The function of children's work serves to "foster development and occupational competence, assist in household labor, and foster social relationships" (Larson, 2004, p. 373). Children's conceptualization of work develops early and is heavily influenced by observation and participation of adults, especially within their families (Brown, 2002; Galinsky, 1999). The development of work ethics, performance skills, and personal value of productivity all influence the child's choice, effort, and time spent in work-related behaviors. Productive activities and the development of work habits through weekly routines serve to develop skills and educate the child in the sociocultural expectations of work within the environmental contexts of the family, school, community, and society. The development of work skills within the child is largely influenced within the school and family contexts. Expectations for on-task behaviors and completion of homework influence the child at school, whereas family participation in household responsibilities and routines facilitates work skills at home (Table 9.1). Occupational scaffolding is a means by which parents foster their children's competence as adults through techniques that use play in order to foster work-related task behaviors (Primeau, 1998). Within the family, work and play are frequently embedded and therefore are often blended experiences without clear distinct lines of whether an activity constitutes work or play (Primeau, 1998).

Work-related occupations (i.e., for school) involve various physical, cognitive, and psychological skills. If a child has difficulty with a particular skill such as attending to a task, challenges result in successfully performing the desired task. Within the frame of reference to enhance childhood occupations, therapists identify enablers and barriers to

TABLE 9.1 Indicators of Function and Dysfunction for Work/Productivity Initiating Behaviors

<i>Engages in Productive Work Tasks</i>	<i>Does Not Engage in Productive Work Tasks</i>
FUNCTION: Ability to engage in productive work tasks in the home, school, and community Indicators of Function - Sustains attention for task completion - Demonstrates adequate physical and psychological skills to meet task demands - Manipulates and uses materials in a productive manner to engage in work behaviors - Performs to age-level expectations in work-related activities in the home, school, and community	DYSFUNCTION: Inability to engage in productive work tasks in the home, school, and community Indicators of Dysfunction - Inability to sustain attention for task completion - Impaired skills in one or more areas cause difficulty with task demands - Difficulty with manipulating and using materials in a productive manner - Does not perform to age-level expectations in work-related activities in the home, school, and community

productive work performance and develop intervention plans with the child and family to maximize strengths, minimize barriers, build on resources, and improve occupational performance.

Indicators of Function and Dysfunction for Play and Leisure

Play is a major means by which children develop competence and mastery (Rodger & Ziviani, 1999). Through exploration of the environment and spontaneous engagement in meaningful activity, children develop social, emotional, cognitive and physical skills that provide the foundation for later role expectations. *Play* is a spontaneous or organized activity that produces enjoyment, entertainment, amusement, or diversion and involves an attitude or mode of experience driven by intrinsic motivation (Parham & Fazio, 1997). The emphasis is on the process rather than the product and is driven by internal rather than external control. Stagnitti, (2004, p. 5) synthesized dispositional concepts of play into the following characteristics:

1. Is more internally than externally motivated
2. Transcends reality as well as reflects reality
3. Is controlled by the player
4. Involves more attention to the process than product
5. Is safe
6. Is usually fun, unpredictable, and pleasurable
7. Is spontaneous and involves nonobligatory active engagement

Within the play context or setting, children are intrinsically driven and take on the role of *player*, which infers active occupational participation in play (Table 9.2). Forms of play may be individual, parallel (next to another individual), didactic (with another individual), or group play. Expectations of the player often include participation based on rules, skills, and habits that lay the foundation for additional roles later in life (Burke, 1993; Parham & Primeau, 1997). Occupational therapists work to foster adaptive play

TABLE 9.2 Indicators of Function and Dysfunction for Play and Leisure

<i>Engages in Play and Leisure</i>	<i>Does Not Engage in Play and Leisure</i>
FUNCTION: Ability to engage in play and leisure to developmental expectations Indicators of Function - Initiates play behaviors - Demonstrates adequate physical and psychological skills to meet task demands - Manipulates and uses materials in a creative manner to engage in play behaviors - Maintains safety within play behaviors - Performs to age-level expectations in individual, dyadic, and group play and leisure	DYSFUNCTION: Inability to engage in play and leisure to developmental expectations Indicators of Dysfunction - Failure to initiate play - Impaired skills in one or more areas cause difficulty with task demands - Difficulty with manipulating and using materials necessary for play - Plays in an unsafe manner - Does not perform to age-level expectations in individual, dyadic, and group play and leisure

skills through analysis of the child's skills, the environmental context, and the nature of the play occupation.

A similar but distinct term to play, "leisure," typically denotes individual choice in time use for the purposes of personal pleasure or psychological need that may or may not be structured (i.e., a hobby or specific craft). Within pediatric practice, developing leisure skills becomes increasingly important as the child ages and enters the adolescent years. Stebbins (1997) identified two types of leisure: casual and serious leisure, the latter of which often requires more structure and often a specific skill set, such as in a hobby. Stebbins (2005) challenged the concept of freedom to choose one's leisure given the fact that there are various sociocultural and leisure constraints that inhibit an individual's choice of leisure (i.e., an individual from a lower socioeconomic background may be limited in the ability to participate in downhill skiing because of limited funds). Given inherent barriers to complete choice of leisure pursuits, Stebbins identified leisure as "uncoerced activity undertaken during free time where such activity is something people want to do, and, at a personally satisfying level using their abilities and resources they succeed in doing" (p. 350). As children develop, peer and family interactions along with contextual opportunities (i.e., a nearby baseball field) influence leisure pursuits.

Indicators of Function and Dysfunction for Activities of Daily Living and Self-Care

An integral part of occupational development is the learning of self-care skills necessary for daily living (Table 9.3). Child factors interact with environmental and temporal contexts affecting occupational performance. Values, interest level, and motivation to engage in personal self-care facilitate skill development and are heavily influenced by caregivers. ADLs include bathing, bowel and bladder management, toilet hygiene, dressing, eating, feeding, functional mobility, personal device care, personal hygiene,

TABLE 9.3 Indicators of Function and Dysfunction for Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL)

<i>Participates in ADL and IADL</i>	<i>Does Not Participate in ADL and IADL</i>
<i>FUNCTION:</i> Ability to complete self-care activities to developmental expectations Indicators of Function - Meets personal, familial, and societal expectations for completion of self care - Demonstrates physical and psychological skills to meet task demands - Manipulates and uses materials to successfully complete self-cares - Demonstrates awareness and follow through regarding the purpose of self-cares - Participation in necessary daily routines related to personal health and hygiene	<i>DYSFUNCTION:</i> Inability to complete self-care activities to developmental expectations Indicators of Dysfunction - Difficulty meeting expectations for completion of self-care - Impaired skills in one or more areas cause difficulty with task demands - Inability to manipulate and use materials for successful completion of self-cares - Lack of understanding regarding the purpose of self-care activities - Difficulty following through with expected self-care routines

sexual activity, and sleep or rest. Instrumental activities of daily living (IADL) include care of others, care of pets, child rearing, communication device use, community mobility, financial management, health management and maintenance, home establishment and management, meal preparation and clean up, safety procedures, and shopping (AOTA, 2002). Given the broad scope of ADL and IADL, therapists must work with the child and family to holistically assess self-care occupational function in the home, school, and community and set priorities related to intervention planning.

Indicators of Function and Dysfunction for Rest and Sleep

The consideration of sleep as an occupation is controversial because it is not equated with action (Christiansen & Townsend, 2004), yet sleep and rest are integral to health and well-being. Sleep–rest patterns and habits are heavily influenced biologically and contextually through the impact of cultural practices and familial daily routines. Inability to obtain proper rest and sleep may result in impaired mood, cognition, immune function, and overall health (Owens, 2004).

The participation in rest and sleep ventures beyond the act and requires the development of routines and habits surrounding sleep preparation, daily rhythms and naps, regulation of arousal, and an awareness of the need for sleep and rest (Table 9.4). Daily occupations related to sleep and rest include preparation (i.e., evening self-care routine, putting on pajamas, and reading a book) followed by the calming of one's physical and emotional state to engage in the rest behaviors. Integral to the development of sleep–rest behaviors is the responsiveness and attitude of the parents; research has indicated that the attitude and under- or over-responsiveness of parents may influence sleep behaviors (Thunstrom, 1999). Within the family there is a dynamic relationship whereby the parental expectations and practices influence child behaviors related to sleep and rest; yet conversely, a child who does not sleep well may cause stress within the family, thereby developing a vicious cycle and impairing a healthy sleep and rest routine. Applying the SCOPE-IT model within this frame of reference to enhance childhood occupations, therapists emphasize sleep and rest as an integral routine in daily life.

TABLE 9.4 Indicators of Function and Dysfunction for Sleep and Rest

<i>Adequate Sleep and Rest</i>	<i>Inadequate Sleep and Rest</i>
<i>FUNCTION:</i> Ability to engage in daily sleep and rest necessary for optimal health Indicators of Function - Follow through with daily routines surrounding sleep and rest - Ability to regulate emotional and arousal states necessary for sleep and rest - Engagement in restful occupations that promote health and balance in daily life as age appropriate (e.g., reading a book before bed)	<i>DYSFUNCTION:</i> Inability to engage in daily sleep and rest necessary for optimal health Indicators of Dysfunction - Difficulty following through with daily sleep and rest routines - Emotional dysregulation and inability to regulate arousal states necessary for sleep and rest - Difficulty with restful occupations

GUIDE FOR EVALUATION

Applying Poulsen & Ziviani's (2004a,b) SCOPE-IT model within the frame of reference to enhance childhood occupations, therapists emphasize top-down approaches to assess overall performance, yet effort is made to look dynamically from both top-down and bottom-up perspectives by considering the synthesis of (1) the child's occupational performance components, (2) the child's occupational engagement, and (3) the environmental context within the scope of time. "The focus is not on the underpinning components of performance but on the balance and quality of time spent engaging in daily occupations" (Poulsen & Ziviani, 2004a, p. 73). As the therapist considers the dynamic exchange of the child, environment, and occupational performance, attempts are made to identify strengths, barriers, and motivational factors in order to develop the intervention plan and to work toward adaptive occupational development, engagement, and performance.

Evaluation methods within this frame of reference to enhance childhood occupations are holistic and include history taking; caregiver and client interviews (depending on the age and function of the child); observation; and use of standardized and nonstandardized tools and techniques to identify the child's occupational performance in work, leisure or play, ADL, and rest. The use of a client-centered approach within the evaluation process attempts to identify the motivations and goals of both the child and the caregivers. In addition, a client-centered occupation-based assessment with the child ideally takes place in the natural setting utilizing meaningful activities and occupations that are motivating to the child (Poulsen, Rodger, & Ziviani, 2006; Primeau, 1999). General questions that the therapist may explore prior to and during the evaluation process include the following:

- What is the reason for the evaluation?
- What are the desired outcomes of this evaluation?
- Which tools and methods will provide a holistic picture of the child's occupational performance and environment within the scope of time?
- How do I make the evaluation process meaningful to the child?
- Is it possible to evaluate this child in his or her natural home, school, or community environment?
- What are the child's wishes and motivations for the evaluation process?
- What are the parents', caregivers', and educators' wishes and motivations for the evaluation process?
- What are the individual and contextual strengths and barriers to performance?
- How can we work from a client-centered focus to maximize occupational performance and elicit adaptive outcomes such as health, satisfaction, sense of well-being, flow, efficacy experiences, quality of life, and positive identity? (Poulsen & Ziviani, 2004b)

Evaluating the Child

Within the evaluation process, the therapist considers a child's habits, routines, roles, skills, and underlying personal characteristics that affect occupational performance in areas of work, productivity, play, leisure, ADL, and rest. A top-down approach considers

TABLE 9.5 Three Levels of Doing

<i>Levels of Doing</i>	<i>Examples</i>
Occupational participation	Self-grooming Playing on playground Completing homework
Occupational performance	Washing face Combing hair Swinging on a swing Jumping rope Writing a paper Mathematical equations
Occupational skill	Sequencing Reaching Manipulating coordinating limbs Socializing Jumping Thinking Problem solving Sequencing

(Adapted from Kielhofner, G. [Ed.]. [2002b]. Dimensions of doing. *Model of Human Occupation* [3rd ed., pp. 1–19]. Baltimore, MD: Lippincott Williams & Wilkins.)

overall function first, yet does not lose sight of underlying child factors that affect performance or the *doing* of an activity.

The concept of *doing* has three levels, (1) occupational participation, (2) occupational performance, and (3) occupational skill (Kielhofner, 2002b) (Table 9.5). Occupational participation is viewed in the broadest sense (i.e., self-grooming), whereas occupational performance involves the specific tasks within the participation (i.e., taking a bath, brushing teeth, and getting dressed). Occupational skill relates to the component requirements of the activity (i.e., reaching, manipulating, and problem solving). As the therapist evaluates the child's occupational participation, performance, and skill, observations are made regarding personal motivation, occupational and social engagement, and contextual influences.

Kielhofner (2002b) asserted that occupational participation is influenced by (1) performance capacities, (2) habituation, (3) volition, and (4) environmental conditions. As a result, standardized evaluations should be paired with additional means of evaluation including interviews and observation.

Specific child factors as influenced by the temporal, physical, and sociocultural contexts affect occupational participation, performance, and skill. A child's performance components include (1) *temporal factors* (the child's chronological age, developmental maturity, life history, and internal clocks), (2) *physical characteristics* (gender, neuromuscular, sensorimotor, perceptual, health, appearance, and biological), and

(3) *psychological characteristics* (cognitive, affective, self-concept, motivation, beliefs, interests, goals, intentions, and spirituality) (Poulsen & Ziviani, 2004b). The therapist approaches evaluation holistically, considering the child as an open dynamic system. Underlying foundations of evaluation acknowledge the complex synthesis of child factors as interrelated with the environment to influence occupational engagement and performance. Ideally, the child is evaluated using occupation-based assessment tools within natural performance environments. Client strengths and barriers are identified along with temporal characteristics that take into consideration the child's chronological and developmental performance expectations. Examples of common assessment tools used to identify child factors in everyday occupational performance include the *Pediatric Evaluation of Disability Inventory* (PEDI) (Haley et al., 1992), the *Functional Independence Measure* (FIM) (Guide for the Uniform Data Set for Medical Rehabilitation, 1999), *Functional Independence Measure for Children* (*Wee FIM II*) (Hamilton & Granger, 2000), the *Vineland Adaptive Behavioral Scales II* (Sparrow, Cichetti, & Balla, 2005), the *School Function Assessment* (Coster et al., 1998), the *Assessment of Motor and Process Skills* (AMPS) (Fisher, 2003), and the *School Assessment of Motor and Process Skills* (Fisher & Bryze, 2005) (Figure 9.7).

Key questions considered in the evaluative process as related to child factors include:

- What is the life history of this child?
- What are the age and developmental expectations of this child?
- What strengths and needs does the child have in occupational performance areas?
- What temporal, physical, and psychological occupational performance components influence this child's engagement and performance in work and productivity, play and leisure, ADL, or self-care and rest?



FIGURE 9.7 A child performs a work activity that would be expected in school.

- What individual characteristics influence this child's performance and how are they related to social, temporal, and physical contexts?

Evaluating Occupational Performance In-Time

A unique feature of the SCOPE-IT model is the emphasis of temporal factors (individual and environmental) as they influence quality and quantity of time spent in daily activity. Choice, time, and effort are focal points within the model (Poulsen & Ziviani, 2004a,b) and are integral to overall balance and quality of performance. Inner drive and perceived opportunities along with past occupational experiences affect the child's choice, participation, and engagement. Occupational choice is influenced by individual and societal forces including personal causation, values, interests, degree of control, perceived efficacy, resources, motivations, opportunities, and social encouragement (Kielhofner, 2002c; Poulsen & Ziviani, 2004b; Wiseman, Davis, & Polatajko, 2005). As the therapist evaluates the child, daily patterns of activity are assessed along with level of participation, engagement, and motivation. Underlying factors related to the child's environmental and social surroundings (i.e. parents, teachers, peers, siblings) are considered along with strengths and barriers to establishing balance and rhythm to foster adaptive responses and promote overall health and development.

Evaluation techniques used to assess personal motivation, choice, and daily patterns of activity may include the use of observation, interviews, time-use charts, interest checklists, and occupation-based tools. An example of an assessment used to identify volitional influences on choice and engagement is the *Pediatric Volitional Questionnaire* (PVQ) (Geist et al., 2002), an observational tool that identifies specific behaviors that influence choice, engagement, and performance. The client is rated on a scale (P-passive; H-hesitant; I-involved; and S-spontaneous) in areas such as initiation, engagement, mastery, pleasure expression, problem solving, and activity completion. The use of observational tools such as the PVQ enables the therapist to evaluate client motivation, choice, and quantity and quality of time spent in occupational activities. Additional assessments such as the *Knox Preschool Play Scale* (Knox, 1997), *Test of Playfulness* (Bundy, 1997), *The Adolescent Role Assessment* (Black, 1976), the *Volitional Questionnaire* (De las Heras et al., 2002), the *Child Occupational Self-Assessment* (Federico & Kielhofner, 2002), the *Canadian Occupational Performance Measure* (either with the parents or child depending on the age and function) (Law et al., 1998), the *Pediatric Interest Profiles* (Henry, 2000), and the *Occupational Therapy Psychosocial Assessment of Learning* (Townsend et al., 2001) are examples of instruments that may be used to evaluate choice, time, effort, and patterns of engagement.

Key questions considered in the evaluative process as related to occupational performance in-time include the following:

- What is the child's discretionary and nondiscretionary use of time and how is it affected by perceived efficacy, control, and performance?
- What influences this child's motivation, choice, effort, and will?
- How do the environment and social contexts (i.e., parents, peers, teachers, and siblings) influence the child's motivation, choice, engagement, and performance?

- What are the environmental and temporal enablers and barriers that influence the child's occupational performance in the scope of time?
- Do the daily rhythm and patterns of engagement contribute to developmental expectations, adaptive occupational performance, and overall health and well-being?
- What are the strengths and the needs in the child's daily pattern of engagement and time use?

Evaluating the Environment

A child's socialization with peers on the playground, performance in household chores, and completion of required school activities are affected by the context in which they are performed. The interaction between the child and the environment influences one another in the scope of time. Environmental contexts offer opportunities and pose barriers to occupational development and performance (Dunn, Brown, & McGuigan, 1994; Primeau, 1999). If a child has several friends, has numerous opportunities for community sports leagues, and is reinforced by success experiences participating in a sporting activity, motivation increases, time spent in the activity may increase, and performance is enhanced. Conversely, if the child is teased by peers, gets poor grades in homework because of familial stressors, and lacks supports necessary for success, performance may suffer as a direct result of environmental constraints.

Evaluation of performance in current contexts must be considered along with future environmental demands to adequately predict present function and future needs (Batavia, 1992). *Context* (cultural, physical, social, personal, spiritual, temporal, and virtual) is a "variety of interrelated conditions within and surrounding the client that influence performance" (AOTA, 2002, p. 623). Occupational performance contexts as identified in the SCOPE-IT model (Poulsen & Ziviani, 2004a,b) include the *temporal environment* (days, weeks, months, year, past, present, future, weekends, and other external time structures), the *physical settings* (location, climate, physical structures, facilities, materials and resources, barriers and supports), and *sociocultural background* (peers, family members, community influences, social norms, roles and cultural expectations, institutions, policies, and mass media).

Evaluation techniques used to assess the environmental performance contexts include the use of history taking, interviews, observations, occupation-based activity analysis, visits to the school and home settings, classroom checklists, and the use of formal tools. Given the underlying premise of the transactional nature between the individual and environment in the SCOPE-IT model, emphasis is placed on the use of natural environments for the evaluation process (Figure 9.8). The use of natural environments may add meaning and motivation to the client (Battari et al., 2006) and provide an opportunity to assess not only client performance but also environmental opportunities and constraints.

Examples of tools used to assess context include the *School Function Assessment* (Coster et al., 1998), the *Classroom Environment Scale* (Moos & Trickett, 2002), the *Social Skills Rating System* (Gresham & Elliot, 1990), the *Home Observation for Measurement of the Environment (HOME)* (Caldwell & Bradley, 1984), and the *Infant-Toddler Environment Rating Scale-Revised* (Harms, Cryer, & Clifford, 2003). In addition, an evaluation of



FIGURE 9.8 Eating Chinese food in the school cafeteria provides an opportunity to master specific motor and social skills.

the client–environment–occupation fit must consider the occupational demands within the context. Occupation-based activity analysis differs from a standard activity analysis in that it is highly individualized and embedded in the perspective of the client, the occupational performance strengths and needs, and the performance context (Crepeau, 2003).

The evaluative process takes into account environmental accessibility, enablers, and barriers to adaptive occupational performance. It is important to move beyond the physical context and integrate temporal and sociocultural considerations and their influence upon the child's occupational performance. Key questions for consideration include the following:

- Who are the important individuals in the child's life (i.e., parents, peers, siblings, and teachers) and how does social engagement foster or hinder adaptive occupational performance?
- What are the strengths and barriers in the child's home, school, and community environments and how do they influence occupational development and performance?
- Do the physical environments meet the needs of the child? What strengths, resources, and barriers are there to facilitating performance?
- What is the quality of the child's relationship with the caregiver, teacher, and other important persons in the child's life?
- Are there barriers and influences in the child's environment that contribute to maladaptive occupational behavior? If so, how may they be addressed?
- What are the societal, temporal, and physical influences on the child?

- How do the parental and teacher expectations and goals relate to the child's expectations and goals?
- How can the intervention plan support the expectations of the child, family, teachers, and other important individuals?

Evaluation Synthesis

The synthesis of the evaluation involves a summary of information from both informal and formal evaluation techniques. Given the dynamic nature of the SCOPE-IT model, the therapist considers the complex influences and reciprocal interactions between the child and environment as related to developmental patterns of engagement and performance (Poulsen & Ziviani, 2006). Intervention is planned from evaluation results acknowledging the child–environment–occupation interactions as an open system, ever changing and continuously influenced by the child's internal and external factors. The therapist works with the child and caregivers to identify goals and develop meaningful occupation-based strategies for intervention.

POSTULATES REGARDING CHANGE

Intervention within this frame of reference, using the SCOPE-IT model (Poulsen & Ziviani, 2004a,b), is built upon the underlying premises that enhancing childhood occupations requires that the therapist maximize the child–environment–occupation fit (Primeau & Ferguson, 1999). Focus is placed on areas of occupational performance within the context, particularly in work, sleep or rest, ADL, and leisure or play. Efforts are made to establish a rhythm and balance that lead to the desired outcomes: (1) health, (2) satisfaction, (3) sense of well-being, (4) flow, (5) efficacy experiences, (6) quality of life, and (7) sense of identity (Poulsen & Ziviani, 2004b).

The following are the postulates regarding change:

1. There is a dynamic interaction between the child–environment–occupation that elicits constant change.
2. A client-centered occupation-based approach considers the child and important individuals in his or her life (i.e., parents, teachers, and siblings) as the primary change agents in the therapeutic process.
3. The use of occupation as a means within therapy enhances occupation as an ends, resulting in improved occupational performance.
4. Therapeutic doing that involves true occupational engagement facilitates greater adaptive change than contrived activities.
5. The facilitation of intrinsically motivated goal-directed activities within a therapeutic environment enhances engagement and leads to adaptation and growth.
6. Activities that are within the scope of the child's capacities, and that have personal meaning, will lead to greater motivation, practice, skill development, adaptation, and improved occupational performance.

7. The creation of occupational opportunities for success enhances engagement, effort, motivation, and mastery.
8. Intervention within real-life environments promotes contextual specific skill development and improved occupational performance.
9. The adaptation, creation, and facilitation of optimal environments and occupational opportunities within occupational therapy intervention results in improved client–environment–occupation fit and enhanced occupational performance.
10. The establishment of healthy life patterns of habits, routines, and time use facilitates improved well-being and quality of life.
11. If the therapist works with the child and significant persons (i.e., parents and teachers) to establish an optimal child–environment–occupation fit, then occupational performance will improve and desired outcomes (health, satisfaction, sense of well-being, flow, efficacy, quality of life, and identity formation) will be met.

APPLICATION TO PRACTICE

Improved occupational performance and quality of life are accomplished through a multidimensional approach that acknowledges the ever-changing relationship between child factors, occupational engagement, and the context in which they occur (Poulsen & Ziviani, 2004b). Within this frame of reference, the use of occupation as a means is essential to therapeutic outcomes and therefore attempts are made to identify areas of meaning and motivation to the client. Intrinsic and extrinsic motivators are viewed as integral to the child's engagement (Poulsen, Rodger, & Ziviani, 2006; Poulsen & Ziviani, 2006), and efforts are made to collaborate with the child and family to maximize the child–environmental fit, which in turn maximizes occupational development and performance (Letts et al., 1994; Primeau, 1999). When applying an occupational approach to intervention, (Poulsen, Rodger, & Ziviani 2006) emphasized three basic needs (1) autonomy, (2) competence, and (3) relatedness to facilitate intrinsic motivation with the child. "Intrinsic motivation means engaging in authentic, self-authored and personally endorsed activities. When individuals are intrinsically motivated they have high levels of spontaneous a-



FIGURE 9.9 Activities in the natural environment foster autonomy and mastery.

The Child–Environment–Occupation Fit

The relationship between person and environmental factors influence the quality and quantity of time spent within daily occupations (Poulsen & Ziviani, 2004b). Interventions aimed at maximizing the child–environment–occupation fit focus on a top-down occupational perspective, yet acknowledge that the component processes affect overall performance (Table 9.6). Strategies to achieve goals include (1) improving occupational performance, (2) adapting occupations or providing assistive technology, (3) modifying the environment, and (4) promoting occupational participation through the use of education (Case-Smith, Richardson, & Schultz-Krohn, 2005). Guiding questions for intervention include the following:

- What was the reason for referral and what are the family’s, child’s, and significant persons’ (i.e., teachers, caregivers, etc.) priorities for intervention?
- How will information from the evaluation be used to achieve goals?
- Given the time and resources available, who, what, where, and how will intervention occur?
- What is the child’s developmental stage, current developmental performance, and expected developmental trajectory?
- What are the strengths and barriers of the child, environment, and occupational requirements for successful performance?
- What education is needed for the family, child, and significant persons?
- How can empowering environments be adapted and created to maximize the child–environmental fit?

TABLE 9.6 Intervention Purposes and Strategies

Improving performance	Using occupation as a means Selecting motivating developmentally relevant occupations to provide the “just right challenge” Utilizing occupation to address the underlying component processes that affect performance Use of cueing, facilitation, and feedback Promoting positive social supports Therapeutic use of self
Adapting occupations and providing assistive technology	Using compensatory strategies Identification of assistive devices to maximize performance Adaptation of the occupation/activity
Creation and modification of environments	Consideration of strengths and barriers in the home, school, and community Analysis of the resource, safety, and accessibility of the environment Consideration of the sociocultural and familial values, influences, and beliefs that influence occupational performance
Promoting participation through education	Educating the family, school personnel, and other important individuals in the child’s life The use of micro (person) level education and macro (systems/community) level education

(Adapted from Case-Smith, J., Richardson, P., & Schultz-Krohn, W. [2005]. An overview of occupational therapy for children. In J. Case-Smith (Ed). *Occupational Therapy for Children* [5th ed., pp. 2–31]. St. Louis, MO: Elsevier Science.)

- How can a rhythm and balance be optimized in the child’s daily occupational patterns to enhance overall health and well-being?

When selecting occupations for interventions, an occupation-based analysis places the client’s interests first and considers interest, goals, abilities, task demands, and contexts (Crepeau, 2003).

Work and Productivity

Although work is a key area of childhood occupational performance, little is written on occupational therapy interventions related to the work skills of children. At a very young age, children learn concepts of work by observing family members and receiving caregiver feedback on the importance of helping out with household tasks. Preschool children may attend environments that require school tasks, and within the home environment they may be expected to take on simple chores such as helping to clean up the play area, or put silverware in a dish tray. Work and play are imbedded in some contexts (Primeau, 1998), yet in other areas such as household chores and schoolwork, the delineation may be more apparent. Larson’s (2004) review of various definitions of childhood work reveals work as a mandatory or strongly guided activity, whereas play is often in the context of free time.

Improving Performance

Occupational performance in the area of work for a child differs from that of adult in that the focus is on (1) work skills, (2) homework, and (3) chores, rather than a paid activity designed to create social capital. Children learn of the importance of work through occupational engagement within the familial and sociocultural expectations. Within the frame of reference to enhance childhood occupations, the therapist acknowledges that children learn to perform household work through observation and participation and therefore daily routines and habits are established encouraging work-related occupations. Primeau (1998) demonstrated that work concepts and skills are often introduced by parents through scaffolding techniques through the use of (1) cues, (2) feedback, (3) anticipation of needs and problems, and (4) providing graded assistance. Therapists consider the nature of the work, child factors, and the context in which the work behaviors take place. Occupational therapy intervention in childhood work supports the importance of (1) keeping the task consistent with the child's concept of work, (2) considering the nature of the disability and readiness for work tasks, and (3) providing adequate time for children to practice, master skills, and develop expectations and routines for the completion of work tasks (Larson, 2004). Additional suggestions include social participation in work tasks with the family, use of guided participation, and gradual transfer of the work responsibilities from the parent to the child (Dunn, 2004). Similar to household chores, intervention surrounding homework attempts to provide the supports necessary and grade the activity for success. Developing homework routines, creating a value in academic success and learning, and identifying areas of strengths are all strategies to maximize the child–occupation–environment fit.

Adapting Occupations, Environments, and Providing Assistive Technology

The use of environmental and task modifications is common in school settings, yet strategies used at schools should be reinforced at home. Augmentative communication devices, communication boards, computers, and adapted learning materials (i.e., books on tape and enlarged print) are common strategies to enhance work performance. Additional modifications within the school environment include (1) consideration of placement, (2) minimization of distractions, (3) the use of adaptive seating devices, (4) the use of assistive writing devices, (5) the implementation of breaks in the daily routine, (6) the use of learning activities to accommodate multiple learning styles, (7) adapted assignments, (8) tutor/peer help, and (9) modified writing utensils. Home adaptations include (1) environmental modifications, (2) task gradation, and (3) the use of structured routines.

Education

Collaboration with the home and school is integral in the therapy process. Reinforcement of work expectations, the development of consistent routines, and the promotion of work values are important (Figure 9.10). The treatment setting may choose to use additional frames of reference when addressing work, including sensory integrative, biomechanical, and behavioral approaches. The use of a behavioral approach paired with the frame of reference to enhance childhood occupations should always keep in mind the underlying



FIGURE 9.10 Sharing a reading assignment at home fosters a value for education.

premise of child-directed activity and should maintain consistency of expectations between the home, school, and community.

Play and Leisure

Play and leisure interventions are aimed at exploration and participation. Exploration relates to identifying appropriate play and leisure activities to maximize the person–occupation fit, whereas participation focuses on the engagement in the play and leisure activities with an emphasis on maintaining a balance with other areas of occupation (AOTA, 2002). While both play and leisure are important, the emphasis in this section will be on play.

Play is a primary means by which children develop competence and learn roles of player and friend (Burke, 1993; Rodger & Ziviani, 1999). Interventions are aimed at occupation as a means (the use of play within therapy) and occupation as an ends (developing underlying social skills necessary for play and interaction) (Figure 9.11). Therapists work with the child as well as the parents to facilitate the “just right challenge” in order to match the child’s skill with the environment and play activity.

Improving Performance

There are various types of play including (1) object play, (2) pretend/imitative play, (3) active play (or sporting activities), (4) construction/manipulative play, and (5) creative play. Children participate in play activities alone, through parallel (side-by-side) play, or through dyadic or group play. The use of play as a therapeutic means differs from free play in that goals and objectives are established by the therapist and parents, and when



FIGURE 9.11 Children enjoying a natural activity on the beach.

possible the child as well (Knox, 2005). The established goals guide the type of play used in therapy, and emphasize child-directed activities.

Therapists use play in four ways during therapy: (1) as a reward for performance that creates therapeutic change; (2) to facilitate acquisition of the developmental components necessary for play; (3) to facilitate the ability to negotiate temporal, spatial, and social dimensions in the environment; and (4) to facilitate an alteration of occupational patterns (Pierce, 1997). Motivation is a key element in play and efforts are made to facilitate playfulness within the child. Suggestions by Knox (2005) to facilitate play in a child include the following:

1. The application of play theories
2. The use of activity/play analysis
3. Let the child lead
4. Empathize
5. Demonstrate spontaneity
6. Display creativity

Within the frame of reference to enhance childhood occupations, the therapist may use play as a therapeutic tool and as an end goal. The focus is top-down, yet the therapist may use additional frame of references such as the sensory integration frame of reference and the biomechanical frame of reference to remediate underlying component deficits. When possible, play is facilitated in natural play environments (i.e., home, school, and community) and contexts are adapted to (1) provide the just right challenge, (2) to facilitate intrinsic motivation and success, and (3) to create adaptive responses. The facilitation of playfulness and occupational patterns that promote play create mastery and dynamically interact with the child to increase motivation for additional play experiences.

Adapting Occupations, Environments, and Providing Assistive Technology

Through the use of activity analysis matched with the child's strengths and needs, play and leisure activities and play environments are adapted to maximize the child-environment-occupation fit. Tldoi-504(--3(ap)-3(tT)1()-3(l()-3(hno-7ay)s()-3(lua)-2(t)-3(i)-2(o) facilit373 -38r1(ntrin3ent-538(motivat376 Td[a0n)e737ncou)tery)TJ1.001 Tc401..523 0 raglit393



FIGURE 9.12 Child practicing potty training.

learning simple budgeting because it is not reinforced within the familial context. In the infant-toddler years, children learn to self-feed, dress, toilet, and perform simple grooming skills (Figure 9.12). As the child reaches school age, increased expectations are placed on basic ADLs, socialization, grooming, and functional communication (Shepherd, 2005). Beginning skills for higher level cooking, money management, and safety skills are also developed. During adolescence, the child typically becomes more independent in all ADLs and IADLs including areas related to emancipation and freedom such as driving, managing personal finances, and taking responsibility for living areas.

Improving Performance

Interventions related to improvement of ADL performance considers the child's development, physical and psychological structures and functions, and the nature of the task demands and contextual barriers and supports. Efforts are made to identify client and family priorities in order to promote skill development, yet foster balance and quality

of life. For instance, Sue, a 13-year-old, with a recent injury resulting in quadriplegia, takes 3 hours to get dressed with assistance. She may determine along with the family and therapist that it would be advantageous for her to have a personal care attendant so that her time could be better spent completing other occupations that take on more meaning for her.

Interventions aimed at improving performance often focus on the use of training techniques along with the use of adaptive equipment and modified environments. Occupation-based ADL teaching strategies may include the use of (1) prompts and feedback, (2) instructional cues, (3) grading of the activity, and (4) repeated opportunities for practice within the daily or weekly routine. When possible the training is completed in the natural environment and reinforced in multiple environments where appropriate (i.e., making change at the store). Additional remedial strategies may be paired with the occupation frame of reference to address underlying factors that affect performance. Strategies to influence motivation include the development of personal value in self-care completion and the use of behavioral approaches to reinforce task completion.

Adapting Occupations, Environments, and Providing Assistive Technology

Assistive devices for ADL include low-technology items such as a tub seat, swivel spoon, or pill box, and high-technology devices such as computers, communication, and mobility devices. Some of the key considerations in selecting assistive technology include the following:

- What are the priorities of the family and child?
- What resources are available?
- What are the child's strengths and needs?
- What will be accomplished with the use of technology? How will developmental and disability/health changes influence technology selection?
- How much training is required for the technology and what are the maintenance requirements?
- How portable is the product and what is its overall utility?
- Are there major safety and maintenance considerations?
- How well does the product fit with the child, the environmental context, and the occupations to be performed?

Additional adaptations may be made to the ADL task and the environment (i.e., accessible areas within the home, school, and community).

Education

Personal self-care expectations may vary from setting to setting. For instance, for a teenager struggling with major depression and attention deficit disorder, the motivation to complete self-grooming may be a challenge. Expectations regarding appearance at home may be very different than at a work setting. Collaboration, communication, and education between the therapist, client, family, and other significant persons are important in setting up clear expectations, providing the necessary environmental supports, and in establishing self-care routines.

Rest and Sleep

The focus of balance and rhythm within the SCOPE-IT model acknowledges the importance of sleep and rest as a vital part of daily occupational patterns. In addition to personal biological rhythms, sleep–rest patterns and habits are heavily influenced by the familial and sociocultural contexts. Sleep disturbances are widespread in children resulting in impact on mood, cognition, and significant performance impairments (Owens, 2004). Physical and emotional distress often negatively affects sleep and rest and therefore attempts are made to design occupational patterns and provide environmental contexts conducive to sleep and rest.

Improving Performance

Strategies used to improve sleep and rest include the establishment of routines around bedtime (i.e., brushing teeth, washing face, and reading a book), the use of calming techniques paired with sleep and rest (massage and warm blankets), and the inclusion of calming quiet occupations into the daily schedule. Therapists may pair additional frames of references such as Neuro-Developmental Treatment, Cognitive Behavioral Strategies, and Sensory Integration in order to affect alert/arousal levels; yet within the frame of reference to enhance childhood occupations, focus is on the daily patterns and rhythms. An analysis of temporal factors related to time use may be completed and suggestions may be made regarding the types of activities performed throughout the day. The therapist, client, and family may have limited control over external factors such as school start times, work requirements, and school/sport-related functions, yet the timing of daily activities is important, particularly as related to the bedtime. For instance, Andy, a 9-year-old child with autism was having considerable difficulty getting to bed by 9 p.m. and was unable to get up at 7 a.m. to prepare for school. A review of his daily occupational pattern revealed that every night at around 7:30 p.m. he liked to go downstairs to listen to his older brother practice on the electric guitar. Typically, Andy would run around, dance, and ask to try out the guitar. A slight revision to his daily schedule, and work with the family and Andy's brother to alter practice times, significantly helped him reduce his arousal level and get to bed closer to the 9 p.m. goal.

Adapting Occupations, Environments, and Providing Assistive Technology

In addition to the establishment of habits and rituals around rest and sleep, environments can be designed to promote restfulness. The environmental surrounding, bedding, and sleeping arrangement may all affect rest and sleep patterns (Owens, 2004). According to the National Sleep Foundation (2007), children who watch more TV traditionally have less rest, and recommendations for sleep environments include removing the television and computer from the child's room. Additional environmental modifications to promote rest times during the day may include the addition of a quiet area at school or home, equipped with lower lighting, comfortable chairs, and quiet activities.

Education

Perhaps one of the most important roles the therapist plays in the area of sleep and rest is that of an educator. Parents and families should be educated about the

importance of routine and establishment of balanced occupational patterns; teachers and educational systems should be educated regarding the importance of rhythm within the daily schedule. Children often need breaks after several hours of sitting, and the daily academic and home schedule should include both high-arousal and low-arousal activities.

Occupational Patterns

A synthesis of the intervention approach within the occupation-based frame of reference is the maximization of the child–environment–occupation fit to promote healthy habits, routines, and patterns. Collaboration occurs with the family, educators, and those within the child’s daily environment. A focal point within the SCOPE-IT model relates to the amount of time and daily rhythm the child spends in work, play, rest, and ADL. Personal choice and motivation affect the amount and quality of time spent in each area of occupational performance and therefore efforts are made to provide empowering environments, create motivating occupational opportunities, and work with the child to develop occupational patterns that create health and well-being. The use of meaningful occupation and the promotion of mastery enhance occupational development and provide a client-centered occupation-based approach in working toward the desired therapeutic outcomes.

Case Example of Shonda

Shonda is a 14-year-old female with a history of fetal alcohol syndrome (FAS), depression, and cognitive deficits secondary to the FAS and head trauma suffered under abuse from her biological father. Shonda was referred to an outpatient clinic that specializes in working with individuals and families affected by FAS. Shonda was placed in foster care at the age of 3 and was adopted at 9 years. She has had marginal success with her adoptive family and frequently gets into physical and verbal altercations with her 11-year-old stepsister and 7-year-old stepbrother. She is fairly athletic and active in a local Special Olympic program and has shown some promise as a swimmer and runner. Recently Shonda has had ongoing difficulties at school because of repeated suspensions for aggressive behaviors. In addition, her teachers report concern that she is not “applying” herself in the classroom. She is mainstreamed in the classroom but does have tutorial support and attends a special afternoon program for high-risk kids. Difficulties at home include an increase in altercations with her siblings, unwillingness to partake in household chores, and spending excessive time watching TV and playing video games. Shonda was referred to the occupational therapy for an evaluation and consideration for 1:1 intervention as well as a possible referral to the adolescent group (Figure 9.13). The group is designed to provide an interactive, fun atmosphere to teach social skills, assertiveness, and healthy ways of coping.

Using the SCOPE-IT model within this frame of reference to enhance childhood occupations, the therapist conducts an evaluation. This includes a home visit, a family interview, a chart review, and an observation of Shonda engaging in a



FIGURE 9.13 Children are occupational and social beings. Peer interaction is a key element of development during the adolescent years.

board game with her siblings. It would also include administration of the *Canadian Occupational Performance Measure* (Law et al., 1998), the *Piers Harris Self Concept Scale 2* (Piers & Herzberg, 2002), the *Adolescent Leisure Interest Profile* (Henry, 2000), the *Vineland Adaptive Behavior Scales II* (Sparrow, Cichetti, & Balla, 2005).

Information from the family and individual interviews revealed that Shonda is fairly active at home, school, and in Special Olympics. She likes activity but, with the exception of her participation in sports, she seems to have difficulty focusing on occupations for more than a few minutes at a time. She performs basic ADLs with minimal assistance but requires moderate assistance with IADLs including money management, cooking, and community mobility. Her father has indicated concern regarding her safety and judgment as well as concerns that at times she is “running with the wrong crowd.” Sleep and rest patterns are erratic given Shonda’s preference for late night television. In addition, she has developed a fixation with Internet games and spends hours at a time playing online games.

Results of the Vineland suggested that Shonda’s communication, daily living skills, and socialization were low as compared with her peers, with motor skills scoring as adequate. Paired with the other assessment tools and observations, the results of the Vineland revealed that Shonda appears to have low self-esteem and places high expectations upon herself as related to her peers and siblings. Sensory issues (based on former occupational therapy reports) as well as Shonda’s continued attempts to be accepted by her peers and family exacerbate aggressive behaviors. In addition, although her adoptive parents have positive intentions, they

often appear to put pressure on Shonda related to school and home performance and do not seem to fully understand the implications of cognitive, sensory, and developmental challenges secondary to her FAS and history of head trauma. The home observation further revealed that although Shonda appears to genuinely like her siblings, power struggles relate to the vying for attention from her parents, and the desire to outperform her siblings in games and competitive activities.

On the basis of the evaluation, Shonda has cognitive, sensory, and psychological challenges that interfere with her daily occupational performance. Her developmental age of adolescence is marked by high personal expectations and desires to be accepted by peers. Given her developmental disability, her self-esteem suffers when comparing herself with classmates. Strengths include her willingness to partake in several daily activities, her high level of attendance to the after school program and Special Olympics, and her performance in motor activities. Difficulties in occupational performance include poor sleep and wake habits, refusal to complete assigned homework, and performance and safety issues with IADLs.

Shonda has a supportive family but feels personal and familial pressure to perform at a level higher than her current capabilities. The home environment, a three-bedroom ranch with a large back yard and a basketball hoop, seems to fit her needs for physical space, but TV and computer in her room cause distraction and encourage overuse. In addition, she currently shares a room with her 11-year-old sister and conflicts arise regarding use of the TV and computer, and disagreement regarding bedtime. At school, Shonda feels continued peer pressure and therefore the plans include a school environment assessment as well as an interview with

reinforcements for decrease in negative behaviors paired with a sensory integrative frame of reference to deal with underlying sensory problems were also implemented. Efforts were made to adapt familial expectations regarding performance, and a strategy involving a daily schedule proved helpful. Predictable daily routines were implemented and Shonda was encouraged to participate in writing out her daily schedule. With time, an educational approach was used to teach Shonda concepts of healthy daily choices in time use and balance of work, play, leisure, ADL, and rest. A behavioral reinforcement system paired with the educational approach worked well to teach her the concepts stressed in the SCOPE-IT model.

Shonda also met individually with the therapist to work on personal safety and simple budgeting. Building on Shonda's interests, she was encouraged to help plan and implement the Special Olympics bake sale and under supervision took care of the cash drawer. Although some social strains continued at both home and school, with time the predictable schedule, involvement in the adolescent group, personal skill training, and environmental adaptations proved helpful. Shonda developed basic coping strategies, decreased her negative behaviors, and was able to spend more time in rest and work occupations providing a healthier overall balance to her daily life. As she felt more confident, she made plans to join a prework group in order to explore future areas of work interest.

CONCLUSION

The use of a model such as SCOPE-IT (Poulsen & Ziviani, 2004a,b; Poulsen & Ziviani, 2006) within this frame of reference to enhance childhood occupations provides a holistic view of promoting adaptive occupational performance through the maximization of the child–environment–occupation fit. Therapists utilize occupation as both a means and ends to achieve desired outcomes. Child-level variables interact with environmental contexts to influence effort, choice, and the quality of time spent in work, play, ADL, and rest. Evaluation and intervention within the frame of reference to enhance childhood occupations involves synthesis of multiple factors influencing the child's occupational engagement.

Function–dysfunction continua are considered along with an understanding of the dynamic influence of child–environment–occupation variables within the scope of time. Through the use of strategies to enhance performance, adapt environments and occupations, and educate at the micro (family, teachers, and caregivers) and macro (systems) levels, therapists work with the child toward the desired outcomes of maximizing adaptive responses, promoting health, well-being, and improving quality of life.

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