1

# The Occupational Therapy Practice Framework and the Practice of Occupational Therapy for People With Physical Disabilities

Heidi McHugh Pendleton and Winifred Schultz-Krohn

#### LEARNING OBJECTIVES

After studying this chapter, the student or practitioner will be able to do the following:

- 1. Briefly describe the evolution of the Occupational Therapy Practice Framework (OTPF), from the original OTPF through the OTPF-4.
- 2. Describe the need for the OTPF-4 in the practice of occupational therapy (OT) for persons with physical disabilities.
- 3. Describe the fit between the OTPF-4 and the *International Classification of Functioning, Disability, and Health* (ICF), and explain how they inform and enhance the

- occupational therapist's (OT's) understanding of physical disability.
- 4. Describe the elements of the OTPF-4, including domain and process and their relationship to each other.
- 5. List and describe the components that make up the OT domain and give examples of each.
- 6. List and describe the components that make up the OT process and give examples of each.
- 7. Briefly describe the OT intervention levels, and give an example of each as it might be used in a physical disability practice setting.

#### CHAPTER OUTLINE

The Occupational Therapy Practice Framework: Domain and Process, Fourth Edition (OTPF-4)—Overview, 2

Evolution of the Occupational Therapy Practice Framework, 3

Need for the Occupational Therapy Practice Framework, 3

Fit Between the OTPF-4 and the *International Classification* of Functioning, Disability, and Health (ICF), 3

The OTPF-4: Description, 4

The Occupational Therapy Domain, 5

The Occupational Therapy Process, 9

Skills That Inform and Guide the Occupational Therapy Process, 10

Types of Occupational Therapy Intervention, 10

Strategies for Learning the OTPF-4, 13

The OTPF-4: Its Use in This Book, 15

Summary, 15

#### **KEY TERMS**

Activities

**Client factors** 

**Contexts** 

**Domain** 

Environment

**Evaluation** 

International Classification of Functioning, Disability,

and Health (ICF)
Intervention

Occupational justice

"The Occupational Therapy Practice Framework: Domain and Process," fourth edition (OTPF-4)

**Occupations** 

Performance patterns

Performance skills

**Process** 

**Targeted outcomes** 

#### **THREADED CASE STUDY**

#### Kent and Keri, Part 1

Kent (who identifies with the pronouns he, him, his) is a highly skilled and very competent OT with more than 25 years of clinical experience. He works in a large rehabilitation center with adult clients who have physical disabilities. He currently is the supervising OT on the spinal cord injury (SCI) unit. Through his reading of OT publications, 5,13,19,31 attendance at conferences and workshops, and interactions with his OT staff and interning OT students, he has become increasingly knowledgeable about the Occupational Therapy Practice Framework (OTPF) and its current version, the OTPF-4. When the OTPF was first published in 2002, he initially was annoyed that, among the many challenges to his professional time and efforts, he would have to learn, yet again, a new "language" to provide competent interventions and that even before he had mastered the first three models, a fourth, updated, edition had appeared. He couldn't help thinking, "Why fix something that isn't broken?" He reluctantly acknowledged the necessity for the change. Now, however, he is impressed by what he has learned so far, and he is convinced that it will be beneficial to delve into and integrate the OTPF-4 into his clinical practice.

Throughout his practice, Kent found it helpful to relate new or novel OT information he is learning to the relevant circumstances that either he or one of his clients is experiencing; in this way he considers the impact the new information might have on either his own life or that of his client.

Kent has decided that, as he works on learning the OTPF-4 and any updates, changes, additions, or eliminations, he will keep in mind one of his recently

admitted clients, Keri. Keri is a single 25-year-old woman (preferring the pronouns she, her, hers) who lives alone in her own apartment and works as an administrative assistant for a busy law office. Keri incurred a cervical SCI and now has C6 functional quadriplegia/tetraplegia that necessitates use of a wheel-chair for mobility. By keeping Keri in mind, Kent expects not only to learn the changes and updates to the OTPF-4 but also to reinforce his new knowledge by putting it to immediate use in his practice.

#### **Critical Thinking Questions**

As you read through the chapter, keep in mind the challenges that learning the OTPF-4 and integrating it into his practice will pose for Kent. Think of strategies you might recommend or use yourself to learn and integrate the information into your practice. In addition, consider the objectives for the chapter, outlined previously, and also these questions:

- 1. Why was there a need for the OTPF and its subsequent three versions, and how do they fill that need?
- 2. How might the specific information presented about the OTPF-4 apply to Kent or Keri?
- 3. Are there tools that Kent and other seasoned OT practitioners, students, and novice OT practitioners can use to help them learn the OTPF initially or learn the changes brought about by the fourth edition of the OTPF and integrate this vital information into their practice?

## THE OCCUPATIONAL THERAPY PRACTICE FRAMEWORK: DOMAIN AND PROCESS, FOURTH EDITION (OTPF-4)—OVERVIEW

Many changes have occurred in the practice of occupational therapy (OT) for persons with physical disabilities since the publication of the previous edition of Occupational Therapy: Practice Skills for Physical Dysfunction in 2018. OT practice settings are increasingly moving away from traditional healthcare environments, such as the hospital and rehabilitation center, and have made significant strides moving more toward the home and community milieus. With the pandemic of 2020, occupational therapy practitioners were challenged to provide intervention via online services such as videoconferencing tools (e.g., Zoom) and delve extensively into the realm of telehealth (See Chapter 52). The provision of OT service has become progressively more client centered, and the concept of occupation is increasingly and proudly named as both the preferred intervention and the desired outcome of the services. Clinicians, researchers, and scholars have sought to implement evidence-based practice by learning more about the benefits of occupation not only to remediate problems after the onset of physical disability but also to anticipate and prevent physical disability and promote wellness. Not surprisingly, economic concerns have severely shortened the amount of time allotted for OT services, thus necessitating more deliberate and resourceful decisions about how these services can be delivered most effectively.

In response to these changes and many other practice advances, came a change, or ongoing evolution, in the language that OTs use to describe what they do and how they do it. This change, in turn, resulted in the document "The Occupational

Therapy Practice Framework: Domain and Process," initially published in 2002 by the American Occupational Therapy Association (AOTA) in the *American Journal of Occupational Therapy* (AJOT).<sup>2</sup> (The model set forth in the initial document is commonly referred to as the Occupational Therapy Practice Framework [OTPF] or just the Framework.) As mentioned at the beginning of this chapter, with the fourth edition came the recommendation to call it simply, the OTPF.

The OTPF is a tool developed by the OT profession to more clearly articulate and enhance the understanding of what OT practitioners do (occupational therapy domain) and how they do it (occupational therapy process). The intended beneficiaries of all four editions of the OTPF were envisioned as including not only OT practitioners (an internal audience of OTs and occupational therapy assistants [OTAs]), but also the recipients of OT services (referred to as clients, including the individual, family members, the community, groups, and populations), other healthcare professionals, and those providing reimbursement for OT services (an external audience).

The first version of the Framework was put into practice, and its relevance and efficacy were assessed; this evaluation resulted in the OTPF-2,<sup>3</sup> which was published in the AJOT in 2008, and subsequently the OTPF-3, which was published in the AJOT in 2014.<sup>4</sup> The same rigorous examination was applied to produce the current version, "The Occupational Therapy Practice Framework: Domain and Process," fourth edition (OTPF-4), which appears in the August 2020 AJOT.<sup>5</sup>

The OTPF-4 is an important document that every OT practitioner should have and consult frequently. It can be downloaded from the AOTA website (http://www.aota.org) by selecting AJOT (under Publications & News at the top of the homepage)

and then the August 2020 issue; a PDF copy of this document can be downloaded and printed for convenience to members of AOTA. Another helpful tool for learning the OTPF is the introductory article by Youngstrom<sup>31</sup> titled "The Occupational Therapy Practice Framework: The Evolution of Our Professional Language," which appeared in the November/December 2002 issue of the AJOT.

It is not the intention of this chapter to supplant the comprehensive OTPF-4 document but, rather, to describe the model and increase the reader's understanding of the OTPF-4 and its relationship to the practice of occupational therapy with adults with physical disabilities. To achieve this, the chapter begins with a discussion of the history of the OTPF, followed by sections describing the need for the OTPF and the fit between the OTPF and the World Health Organization's (WHO) International Classification of Functioning, Disability, and Health (ICF).30 Next, a detailed description of the OTPF-4 is presented, with emphasis on explicating the domain of occupational therapy through examples from the case study and introducing the OT process (discussed in depth in Chapter 3) in the transactional application of the OTPF-4 when working with individuals with physical dysfunction. The types of OT intervention proposed by the OTPF-4 are examined and illustrated by examples typically used in physical disabilities practice settings. The chapter concludes with suggestions and strategies for learning the OTPF and an overview of how the latest version—the OTPF-4—is integrated as a unifying thread throughout the remaining chapters in the book.

## **Evolution of the Occupational Therapy Practice Framework**

In 1999 the AOTA's Commission on Practice (COP) was charged with reviewing the "Uniform Terminology for Occupational Therapy," third edition (UT-III), a document that had been published by the association 5 years earlier.<sup>5</sup> Under the leadership of its chair, Mary Jane Youngstrom, the COP sought feedback from numerous OT practitioners, scholars, and leaders in the profession about the continued suitability of the UT-III to determine whether to update the document or to rescind it. Previous editions of the UT, in 1979 and 1989, had been similarly reviewed and updated to reflect changes and the evolving progress of the profession. The reviewers found that the UT-III, although considered a valuable tool for OTs, lacked clarity for both consumers and professionals in associated fields about what OTs do and how they do it. Furthermore, they found that the UT-III did not adequately describe or emphasize OT's focus on occupation, the foundation of the profession.<sup>13</sup> Given the feedback from the review, COP determined that a new document was needed, one that would preserve the intent of the UT-III (outlining and naming the constructs of the profession) while providing increased clarity about what OTs and OTAs do and how they do it. Additionally, it was determined that the new document would refocus attention on the primacy of occupation as the cornerstone of the profession and desired intervention outcomes, in addition to showing the process OTs use to help their clients achieve their occupational goals.

## Need for the Occupational Therapy Practice Framework

The original OTPF and the revised versions (OTPF-2, 3, and now 4) make it clear that the profession's central focus and actions are grounded in the concept of occupation. Although some of what OTs do could be construed by clients and other healthcare professionals as similar to or even duplication of the treatment efforts of other disciplines, formally delineating occupation as the overarching goal of all that OT does, and clearly documenting supportive goals intended to achieve that main goal, establish the profession's unique contribution to client intervention.

This is not to say that before the OTPF, OT practitioners did not recognize or focus on occupation or occupational goals with their clients-most did. 14,15,19,23 However, in the physical disabilities practice setting, with the reductionistic, bottom-up approach and pervasive influence of the medical model, occupation was seldom mentioned or linked to what was being done in OT. A premium seemed to be placed on "medical speak," and it was difficult, if not impossible, to document occupational performance or occupational goals using the types of documentation characteristic of physical disabilities practice settings. Kent, the OT from the case study, still occasionally experiences the medical team members' heightened interest when the OT report focuses on muscle grades and sensory status and, in comparison, their quizzical, glazed-over looks when the clients' difficulties resuming homemaking, leisure, or other home and community skills are described. The OTPF-4 provides a means of communicating to healthcare professionals who are not OTs that engagement in occupation should be the primary outcome of all intervention.

The OTPF-4 provides a language and structure that communicates occupation more meaningfully. It empowers OTs to restructure evaluation, progress, and other documentation forms to reflect the primacy of occupation in what OT does, and it shows the interaction of all the aspects that contribute to supporting or constraining the client's participation. Thus, by clearly showing and articulating the comprehensive nature of OT's domain of practice to clients, healthcare professionals, and other interested parties, OTs enlist support and demand for their services and, most importantly, ensure that clients receive the unique and important services that OT provides. Equally important, the OTPF-4 positions the client as a collaborator with the OT at every step of the process, thereby empowering the individual as a change agent and reframing the image of the client as a passive recipient of services. <sup>13</sup>

## Fit Between the OTPF-4 and the *International Classification of Functioning, Disability, and Health* (ICF)

There appears to be an excellent fit between the OTPF (all editions) and the ICF. About the same time the UT-III was being studied for continued suitability for contemporary language and practice, the WHO was revising its language and classification model. The result, the *International Classification of Functioning, Disability, and Health*, contributes to the understanding of the complexity of having a physical disability.<sup>30</sup>

The ICF "moved away from being a 'consequences of disease' classification to become a 'components of health' classification," progressing from impairment, disability, and handicap to body functions and structures, activities, and participation. In the ICF, body structures refers to the anatomic parts of the body, and body functions refers to a person's physiological and psychological functions. Also considered in this model is the impact of environmental and personal factors as they relate to functioning. The ICF adopted a universal model that considers health along a continuum that shows the potential for everyone to have a disability. The WHO perceived this as a radical shift—from emphasizing people's disabilities to focusing on their level of health.

The ICF also provides support and reinforcement for OT to specifically address activity and activity limitations encountered by people with disabilities.<sup>30</sup> In addition, it describes the importance of participation in life situations, or domains, including (1) learning and applying knowledge; (2) general tasks and task demands; (3) communication; (4) movement; (5) self-care; (6) domestic life areas; (7) interpersonal interactions; (8) major life areas associated with work, school, and family life; and (9) community, social, and civic life. All of these domains are historically familiar areas of concern and intervention for the OT profession. Although a physical disability may compromise a person's ability to reach up to brush his or her hair, the ICF redirects the service provider to also consider activity limitations that may result in restricted participation in desired life situations, such as sports or parenting. A problem with a person's bodily structure, such as paralysis or a missing limb, is recognized as a potentially limiting factor, but that is not the focus of intervention.

OT practitioners think that intervention provided for people with physical disabilities should extend beyond a focus on recovery of physical skills and address the person's engagement, or active participation, in occupations. This viewpoint is the cornerstone of the OTPF-4 and previous versions. Such active participation in occupation is interdependent on the client's psychological and social well-being, which must be simultaneously addressed through the OT intervention. This orientation is congruent with the emphasis reflected in the ICF.

In many instances the language of the UT-III was different from that used and understood by the external audience of other healthcare professionals. Similarly, the terminology of the previous WHO classification frequently differed from that used by the audience with which the organization was trying to communicate (e.g., healthcare professionals and other service providers). The goals of the new WHO classifications, the ICF, are to increase communication and understanding about the experience of having a disability and unify services. In a similar manner, the original OTPF, and now the updated OTPF-4, was designed to increase others' knowledge and understanding of the OT profession and, where appropriate, to incorporate the language of the ICF, as will be seen in the following discussion of the OT domain and process.

Detailed information on the ICF can be found in the document referenced in this chapter,<sup>30</sup> or an overview of the document can be downloaded from <a href="http://www.who.int">http://www.who.int</a>.

A helpful resource for learning the ICF is the Beginners Guide to the ICF, which also can be accessed at the website <a href="http://www.who.int">http://www.who.int</a>. Additional and annually updated documents on the ICF also are available at this website.

#### THE OTPF-4: DESCRIPTION

The OTPF-4 is composed of two interrelated parts, the domain and the process. The **domain** articulates the focus and factors addressed by the profession and where the profession has an established body of knowledge and expertise, and the **process** describes how occupational therapy does what it does (evaluation, intervention, and outcomes)—in other words, how the domain is put into practice by providing client-centered care focused on engagement in occupations. Central to both parts is the essential concept of occupation. The definition of occupation used by the developers of the original Framework is:

Activities of everyday life, named, organized, and given value and meaning by individuals and a culture. Occupation is everything people do to occupy themselves, including looking after themselves, enjoying life, and contributing to the social and economic fabric of their communities.<sup>2,19</sup>

The next two revised Frameworks (OTPF-2 and OTPF-3), rather than adopting a single definition, used several definitions found in the OT literature<sup>3,4,16,22,27</sup> (OTPF-3, pp. S5-S6). The committee charged with producing the OTPF-3 ultimately suggested that an array of selected definitions of the term occupation, offered by the scholars of the profession, would add to an understanding of this core concept (see OTPF-3, pp. S5-S6).4 For the OTPF-4, a singular definition of occupation was adopted, which is: "Everyday personalized activities that people do as individuals, in families, and with communities to occupy time and bring meaning and purpose to life. Occupations can involve the execution of multiple activities for completion and can result in various outcomes. The broad range of occupations is categorized as activities of daily living, instrumental activities of daily living, health management, rest and sleep, education, work, play, leisure, and social participation" (see Appendix A, pp. 79).5 The term occupation is differentiated from activities in the OTPF. Activities is defined as "actions designed and selected to support the development of performance skills and performance patterns to enhance occupational engagement" (see Appendix A pp. 74).5

In adopting the essence of this definition, the developers of the OTPF-4 characterized the profession's focus on occupation in a dynamic and action-oriented form, in which they echoed the words of the OTPF-3, articulated as "achieving health, wellbeing and participation in life through engagement in occupation"<sup>4,5</sup> (OTPF-3, p. S2 and OTPF-4, p. 5). This phrase links the two parts of the Framework, providing the unifying theme or focus of the OT domain and the overarching target outcome of the OT process—an inextricable linkage between domain and process that the authors of both the OTPF-3 and the OTPF-4 describe as "transactional."<sup>4,5</sup>

#### **The Occupational Therapy Domain**

The domain of occupational therapy encompasses the gamut of what OTs do, along with the primary concern and focus of the profession's efforts. Everything that occupational therapy does or is concerned about, as depicted in the domain of the OTPF-4, is directed at supporting the client's engagement in meaningful occupation that ultimately affects the health, well-being, and life satisfaction of that individual.

The current five broad areas that constitute the OT domain are occupations, client factors, performance skills, performance patterns, and context. These categories, which are dynamically interrelated, represent the practice domain of the occupational therapy profession. The OTPF stipulates that there is no hierarchy of categories within the domain of occupational therapy practice. The developers of the OTPF-3 pointed out that there is a complex interplay among all of these areas or aspects of the domain, that no single part is more critical than another, and that all aspects are viewed as influencing engagement in occupations. This concept was reinforced with the fourth edition of the OTPF. Furthermore, the success of the OT process (evaluation, intervention, and targeted outcomes) is incumbent on the OT's expert knowledge of all aspects of the domain. The expert practice of OT requires the therapeutic use of self, clinical reasoning (knowledge of theory and evidence), and skills in activity analysis and activity demands to create the overview that guides each step of the process.

#### **Occupations**

OTs frequently use the terms occupation and activity interchangeably. In the Framework, the term occupation

encompasses the term activity. Occupations may be characterized as being meaningful and goal directed but not necessarily considered by the individual to be of central importance to her or his life. Similarly, occupations also may be viewed as (1) activities in which the client engages, (2) activities that have the added qualitative criteria of giving meaning to the person's life and contributing to his or her identity, and (3) activities in which the individual looks forward to engaging. For example, Keri, Kent's client with quadriplegia, regards herself as an excellent and dedicated clothes and accessories shopper; holidays and celebrations always include her engagement in her treasured occupation of shopping. Kent, on the other hand, regards the activity of shopping for clothes as important only to keep himself clothed and maintain social acceptance. Kent avoids the activity whenever possible. Each engages in this activity to support participation in life but with a qualitatively different attitude and level of enthusiasm. In the OTPF-4, both of these closely related terms are used to recognize that individual clients determine the occupations he or she regards as meaningful and those that are simply necessary or are activities that support the person's participation in life. For Kent, shopping is a necessary occupation or activity, but for Keri, it is a favorite occupation.

The occupation category of the domain includes nine comprehensive types of human activities or occupations. Each is outlined in the following discussion; a list of typical activities included in each type is provided; and examples from the physical disability perspective, as provided by Keri's circumstances, are presented.

#### THREADED CASE STUDY

#### Kent and Keri, Part 2

Perusing the list of activities of daily living (ADLs) in Table 1 of the OTPF, Kent noted that virtually every category, with the exception of eating (which involves the ability to keep and manipulate food in the mouth and the ability to swallow), would be a concern for his client, Keri, because of the nature and extent of her SCI disability. When Kent discussed this list, Keri viewed practically all as necessary activities but personally valued feeding, sexual activity, and personal hygiene and grooming as being extremely important for her satisfactory participation in life. Keri was a little surprised to learn that sexual activity was included. "So this is occupational therapy? Maybe I'll wait awhile before I talk about this topic, but it's good to know I'm expected to be interested."

For the present, Keri's attention turned to activities of immediate interest, including those tasks associated with the personal hygiene and grooming category and its detailed description:

Obtaining and using supplies, removing body hair (use of razors, tweezers, lotions, etc.), applying and removing cosmetics, washing, drying, combing, styling, brushing and trimming hair; caring for nails (hands and

feet), caring for skin, ears, eyes, and nose, applying deodorant, cleaning mouth, brushing and flossing teeth; or removing, cleaning, and reinserting dental orthotics and prosthetics.<sup>5</sup> (OTPF, p. S30)

The numerous details reminded her of how important all these grooming activities were to her, and they indicated the scope of the daily activities she would like to address in OT. Of particular concern to Keri were the grooming activities of shaping her eyebrows and styling her hair; these were bodily care activities she regarded as very personal. In fact, she was reluctant to let anyone do these for her. Although under similar circumstances Kent might have gladly deferred these two ADLs, it was clear that Keri prioritized them as personally meaningful occupational goals.

In studying the list of ADLs, Kent noted that, just like personal hygiene and grooming, each ADL item listed had a similarly helpful definition and detailed list of examples in the tables throughout the OTPF-4 document. He remembered reading that these lists were provided to give a few examples, that they were not to be considered exhaustive, and in fact that there was an expectation that

#### THREADED CASE STUDY - cont'd

#### Kent and Keri, Part 2

the lists would be modified and expanded on as the OTPF became more familiar and integrated into practice.

ADLs (also referred to as personal activities of daily living [PADLs] or basic activities of daily living [BADLs]) are activities that have to do with accomplishing one's own personal body care. The body care activities included in the ADL category are bathing/showering, toileting and toileting hygiene, dressing, eating and swallowing, feeding, functional mobility, personal hygiene and grooming, and sexual activity.

Instrumental activities of daily living (IADLs) are "activities to support daily life within the home and community" (OTPF, p. S30). The specific IADLs included in the domain are care of others (including selecting and supervising caregivers), care of pets, childrearing, communication management, driving and community mobility, financial management, home establishment and management, meal preparation and cleanup, religious and spiritual expression, safety and emergency maintenance, and shopping.

Knowing that the IADL shopping was certain to be a priority occupation for Keri, Kent made a note of the full description of shopping from the corresponding lists of IADLs in the OTPF-4. Shopping is described there as "Preparing shopping lists (grocery and other); selecting, purchasing, and transporting items; selecting method of payment and completing payment transactions; managing internet shopping and related use of electronic devices such as computers, cell phones, and tablets" (OTPF, p. S31). This is not as detailed as some descriptions, but it is a good start for looking at the related activities that would have to be addressed if Kent and Keri were to collaborate on Keri's resumption of engagement in shopping. Kent also noted that the occupation category of driving and community mobility included both driving and the use of public transportation, another IADL that would be important to explore with Keri as she contemplates returning to paid work. In fact, the entire list of IADLs held numerous concerns to be addressed in OT.

Health management is an occupational domain that addresses "[a]ctivities related to developing, managing, and maintaining health and wellness routines, including self-management, with the goal of improving or maintaining health to support participation in other occupations" (OTPF, p. S32). This is an important area for Kent to address with Keri considering the health management concerns when an individual has sustained a C6 SCI. This area of occupation includes social and emotional health promotion and maintenance, symptom and condition management, communication with the healthcare system, medication management, physical activity, nutrition management, and personal care management.<sup>5</sup>

Rest and sleep, recognized as an occupation in the OTPF-4, includes "activities related to obtaining restorative rest and sleep to support healthy, active engagement in other occupations" (OTPF, p. S32). The component activities constituting rest and sleep include rest, sleep preparation, and sleep participation (see Chapter 13 for an expanded discussion of this important occupation). Keri's sleep occupations will be significantly changed as a result of her diagnosis. To name just two of the concerns OT will have to address, she will need to be repositioned frequently during the night for skin precautions and equipment will have to be set up to manage her bladder function while she sleeps.

Education is an occupation that includes "activities needed for learning and participating in the environment" (OTPF, p. S33). Specific education activity subcategories include formal education participation, informal personal educational needs or interests exploration (beyond formal education), and informal personal

education participation. Table 2 of the OTPF includes more details about the specific activities in each of these subcategories.

Work includes activities associated with both paid work and volunteer efforts (see Chapter 14). Specific categories of activities and concerns related to the occupation of work include employment interests and pursuits, employment seeking and acquisition, job performance, retirement preparation and adjustment, volunteer exploration, and volunteer participation<sup>5</sup> (OTPF, pp. S33–S34).

Activities associated with the occupation play are described as "[a]ctivities that are intrinsically motivated, internally controlled, and freely chosen and that may include suspension of reality (e.g., fantasy; Skard & Bundy, 2008), exploration, humor, risk taking, contests, and celebrations (Eberle, 2014; Sutton-Smith, 2009). Play is a complex and multidimensional phenomenon that is shaped by sociocultural factors. "<sup>20</sup> Considered under this area of occupation are play exploration and play participation<sup>5</sup> (OTPF, p. S34).

Leisure is defined as "nonobligatory activity that is intrinsically motivated and engaged in during discretionary time, that is, time not committed to obligatory occupations such as work, self-care, or sleep." Leisure exploration and leisure participation are the major categories of activity in leisure occupations (OTPF, p. S34) (see Chapter 16). Keri shared with Kent her interests in spending leisure time listening to music, traveling, antiquing, swimming, playing bridge, and reading books. As Kent was studying the description of leisure, it occurred to him that for Keri, shopping might be characterized as a leisure occupation in addition to an IADL. It probably would depend on the circumstances or context in which she engaged in the activity of shopping, he thought—another parameter of the OTPF domain.

Social participation is another occupation that encompasses the "interweaving of occupations to support desired engagement in community and family activities as well as those involving peers and friends7; also, involvement in a subset of activities that involve social situations with others1 and that support social interdependence.7 Social participation can occur in person or through remote technologies, such as telephone calls, computer interaction, and video conferencing"4 (OTPF, p. S21). The occupation of social participation, as stated in the OTPF, views this as the activities that involve social interaction with others, including family, friends, peers, and community members, and that support social interdependence. <sup>6,18</sup> The occupation of social participation further encompasses engaging in activities that result in successful interaction at the community, family, and peer/friend levels. (Just as for previously discussed occupations, see the OTPF, Table 2, for definitions and more detailed information about the breadth of activities that constitutes OT's involvement in work, play, leisure, and social participation.)

Like Kent, readers currently learning the OTPF could benefit from studying the expanded lists to broaden their understanding of the OT domain. As Kent studied these sections of Table 2, he found it helpful to make note of the content of each one that included specific activities that would be relevant to Keri when engaging in the various occupations. For example, Kent considered the range of job skills and work routines necessary for Keri to return to the paid position as an administrative assistant. Kent also made a list of similar concerns involved in resumption of Keri's preferred play and leisure occupations, including swimming, reading, and board games. Kent was reminded of the importance of considering the activities that can support or constrain Keri's continued social participation in her community as a Girl Scout leader, in her family as the oldest daughter, and with her treasured circle of friends.

#### **Performance Skills and Performance Patterns**

Remember that throughout the OTPF document, there is no correct or incorrect order in which to study or follow the areas of the domain—there is no hierarchy: "All aspects of the occupational therapy domain transact to support engagement, participation, and health (OTPF-4, p. S7).<sup>5</sup> With this in mind, the next main areas of the domain to consider are performance skills and performance patterns. Both are related to the client's performance capabilities in the areas of occupation previously described, and they can be viewed as the actions and behaviors observed by the OT as the client engages in occupations.

The category of performance skills includes three components of concern: motor skills, process skills, and social interaction skills. The client's successful engagement in occupation or occupational performance depends on his or her having or achieving adequate ability in performance skills. In the OTPF, performance skills are defined as "observable, goal-directed actions that result in a client's quality of performing desired occupations" (OTPF, p. S43). Briefly, performance skills are the abilities clients demonstrate in the actions they perform. Problems in any of the three areas of performance skills are the focus for formulating short-term goals or objectives to reach the long-term goal of addressing participation in occupation. The OTPF provides an example of performance skills for persons and for groups. In this portion of the OTPF, the term "group" refers to a collective of members, not the intervention strategy.

Motor skills consist of actions or behaviors a client uses to move and physically interact with tasks, objects, contexts, and environments, including planning, sequencing, and executing new and novel movements. In Table 7 of the OTPF, motor skills are defined as "skills that represent small, observable actions related to moving oneself and interacting with tangible task objects ... in the context of performing a personally and ecologically relevant daily life task. <sup>15</sup> Examples of motor skills include coordinating body movements to complete a job task, anticipating or adjusting posture and body position in response to environmental circumstances, such as obstacles and manipulating keys or a lock to open a door.

Kent observed Keri as she played a game of bridge with friends one afternoon in the OT clinic. Observing her performance skills, particularly her motor skills, Kent noted that Keri looped one elbow around the upright of her wheelchair, leaned her trunk toward the table, reached her other arm toward the cardholder, and successfully grasped a card, using tenodesis grasp, after three unsuccessful attempts. Kent perceived this as indicating that Keri felt the need to calibrate her attempts and endure or persist (see Chapter 38).

The OTPF defines process skills as "small, observable actions related to selecting, interacting with, and using tangible objects; . . . carrying out individual actions and steps; and preventing problems of occupational performance from occurring or reoccurring in the context of performing a personally or ecologically relevant daily life task." Simply stated, process skills are observable actions taken to manage and modify the occupational task; for example, using knowledge, attending to and discerning solutions to problems, and organizing the task, including choosing appropriate tools and methods for performing the task.

Kent also observed Keri's process skills as she set up her cardholder so that her cards were not visible to her opponents (selecting and gathering proper equipment and arranging the space), perused her cards, paused, rearranged them using her tenodesis hand splint/orthotic device (attending to the task, using knowledge of the rules of bridge, and selection of proper equipment), and then stated her bid (demonstrating discernment, choosing, and problem solving).

Social interaction skills, the third category of performance skills, are "small, observable actions related to communicating and interacting with others in the context of engaging in personally and ecologically relevant daily life tasks that involve social interaction with others." Such skills could include asking for information, expressing emotion, and interacting with or relating to others in a manner that supports engagement in the occupation at hand.

During the card game, Kent was able to observe a wide array of examples of Keri's social interaction skills. He saw Keri furrowing her brow; squinting her eyes shut in a thoughtful, cogitating manner; pursing her lips; and showing neither happiness nor despair on her face as she studied her cards in the cardholder (expressing affect consistent with the activity of card playing and thus demonstrating or displaying appropriate emotions and cognitive skill in determining her next strategy). As she reached for the cards, the holder moved out of her reach; she turned and asked the friend next to her to push it back, cautioning her in a smiling and light manner, "Don't you dare look!" (demonstrating her ability to multitask—asking for assistance and simultaneously using socially acceptable teasing behavior [social interaction skills] that enlists an opponent's cooperation in preserving the secrecy of her cards, thus conveying or disclosing the image of a savvy card player). Her observable performance skills supported Keri's continued inclusion with friends in a favorite leisure occupation.

Each of these particular motor skills, process skills, and social interaction skills categories has detailed lists of representative skills annotated with definitions, descriptions, and examples (see OTPF, Table 7).<sup>5</sup>

Performance patterns are the "habits, routines, roles, and rituals that may be associated with different lifestyles and used in the process of engaging in occupations or activities" (OTPF, p. 41). Examples of habits listed in Table 6 of the OTPF include automatically putting car keys in the same place and spontaneously looking both ways before crossing the street.5 Routines reflect the "patterns of behavior that are observable, regular, repetitive, and that provide structure for daily life. They can be satisfying, promoting, or damaging. Routines require delimited time commitment and are embedded in cultural and ecological contexts"<sup>5</sup> (OTPF, p. S41). Routines show how the individual configures or sequences occupations throughout daily life. Habits typically contribute (positively or negatively) to a person's occupational routines, and both are established with repetition over time. Roles refers to how the person's "identity is shaped by culture and context that may be further conceptualized and defined by the client" (OTPF, p. S41). Rituals are described as "symbolic actions with spiritual, cultural, or social meaning, contributing to the client's identity and reinforcing

values and beliefs. Rituals have a strong affective component and represent a collection of events" (OTPF, p. S41). Table 6 of the OTPF outlines definitions and examples of performance patterns for groups and populations.<sup>5</sup>

Performance patterns for the individual and the ways these can support (or, by inference, hinder) occupational performance are further illustrated in Part 3 of the Kent and Keri case study.

#### **THREADED CASE STUDY**

#### Kent and Keri, Part 3

Some might view Keri's engagement in the occupation of paid work as an example of the role of worker. Inherent in this role are accepted norms that customarily include regular attendance, timely adherence to schedules, and acceptance of responsibility for completing assignments. Keri's work role is consistent with the sets of behaviors that would be expected of an administrative assistant at a busy law firm, including arriving at work on time, handling e-mail and other correspondence in a professional manner, managing the office budget and payroll according to accepted audit practices, and interacting with her supervisors, co-workers, and supervisees in a fair and respectful manner, to name just a few. To honor her stellar work performance, a ritual that evolved as part of Keri's work role experience at the law office is the annual Holiday Shopping Day. Keri and her three administrative assistant colleagues are given the Friday before the holiday off with pay. The law firm arranges transportation for all administrative assistants and transports them to the downtown shopping district, where they are given a generous gift card, lunch at a downtown restaurant, an afternoon of shopping, and transportation back home at the end of the day.

Keri's workday routine involves waking at 6:30 am; showering, grooming, and dressing; driving to work, with a stop for breakfast on the way; and arriving at her workplace early (at 7:45 am) for an 8:00 am expected work start. A habit that Keri regards as beneficial to her workday routine is her scrupulous use of her phone to record appointments; contact information, including phone numbers; and additions to her things-to-do list. Another habit she thinks contributes to the success of her workday routine is selecting her clothes the night before to save time in the morning, thus ensuring a punctual arrival at work. A habit that negatively affects her daily work routine is hitting the snooze button on her cell phone. Both Kent and Keri recognize that although Keri may resume her work occupation or worker role, her SCI has substantially altered her ability to carry out expected behaviors and her customary habits and routines; she will have to develop the ability to establish new and expanded habits and routines. Successful integration of these new habits and routines will undoubtedly determine the continuation of Keri's participation in the highly anticipated and beloved Holiday Shopping Day ritual.

Keri's occupational performance, performance skills, and patterns will be significantly influenced by the next two main areas of the domain to be discussed: contexts and client factors.

Contexts, as described in OTPF-4, includes both environmental and personal factors. Each will be discussed in relation to Keri's occupational engagement. Contexts are regarded as the variety of interrelated conditions, circumstances, or events that surround and influence the client and in which the client's daily life occupations take place. Contexts can either support or constrain health, well-being, and participation in life through engagement in occupation.

The OTPF states that "environmental factors are aspects of the physical, social, and attitudinal surroundings in which

people live and conduct their lives" (OTPF-4, p. 36).<sup>5</sup> The **environment** includes the natural and the human-made factors, including the environmental modifications made by people and characteristics of the human populations within the environment. The environment addresses not only the physical aspects but also products and technology, supports and relationships, attitudes, services, systems, and policies (Table 4).<sup>5</sup> Personal factors, another part of Contexts, describes the "background of the person's life and living and consists of the unique features of the person that are not part of a health condition or health state" (Table 5, p. S40).<sup>5</sup> *Personal factors* include age, gender identity, sexual orientation, socioeconomic status, and educational status; it can also include group membership (e.g., volunteers, employees) and population membership (e.g., members of society).<sup>5</sup>

Each of these contexts, as they pertain to Keri's specific circumstances, will significantly affect her future engagement in occupation. Keri's physical environment includes aspects that will support her engagement in occupation, including an accessible work site, a reliable and accessible system of public transportation in her neighborhood, and a well-appointed downtown area of stores, shops, and restaurants within wheelchair distance. Aspects of her physical environment that may interfere with resumption of occupations include Keri's second floor apartment and small bathroom, which are inaccessible to a wheelchair. Supportive aspects of Keri's personal context are her college education in business and the fact that she has unemployment insurance, which will supplement her sick leave and continue her health coverage. From a social environment perspective, Keri is supported by both her family and her friends; additionally, her employer and co-workers are anxious to have her come back to the law firm. The attitudinal environment those values, customs, and beliefs—includes the presence of the Americans with Disabilities Act (ADA), which acknowledges the job essentials at the law firm can be performed by Keri. This knowledge motivates Keri to resume engagement in previous levels of occupation for full participation in all environments and contexts and, ultimately, occupations of her life.7

Given the difficulty that resuming Keri's shopping occupation may present, Kent suggested the possibility of using online shopping for some items. Although interested, Keri indicated that her preference was to shop "in the real world" with her colleagues and friends. Keri's ultimate decisions no doubt will be influenced by the changes she experiences and adjusts to, such as the increased amounts of time required to accomplish basic daily routines that, in turn, support her engagement in preferred occupations.

#### **Client Factors**

OTPF-4 describes **client factors** in a manner similar to the ICF.<sup>5,23</sup> There are three sections in this portion of the OTPF-4: values, beliefs, and spirituality; body functions; and body structures. These three categories of client factors are regarded as residing within the client, and they may affect or influence the performance of occupations.<sup>5</sup> Client factors may be affected by performance skills, performance patterns, and contexts; in addition, they may have a cyclical/reciprocal relationship with

and profound effect on the client's ability in those areas and, ultimately, satisfactory performance of occupations.

The client factor category of values, beliefs, and spirituality is described as encompassing the client's perceptions, motivations, and related meaning that influence or are influenced by engagement in occupations.<sup>4</sup> Table 9 of the OTPF describes values as beliefs and commitments, derived from culture, about what is good, right, and important to do (e.g., commitment to family), whereas beliefs are described as cognitive content held as true by the client (e.g., hard work pays off).<sup>5</sup> The third aspect, spirituality, is described as "a deep experience of meaning brought about by engaging in occupations" (OTPF, p. S 51).<sup>5</sup> For example, Keri's values, including her strong work ethic and her beliefs and spirituality, provide her the reassurance that her SCI was part of a higher power's plan and she will be given the strength to cope and succeed.<sup>26</sup>

The body structure category refers to the integrity of the actual body part, such as the integrity of the eye for vision (see Chapter 24) or the integrity of a limb (see Chapter 44). When the integrity of the body structure is compromised, this can affect function or require alternative approaches to engagement in activities, such as enlarged print for persons with macular degeneration or the use of a prosthesis for a person who sustained a below-elbow amputation. It is unlikely that this category of the domain would apply to Keri because the integrity of her body structures is not necessarily compromised by her diagnosis. Should she develop a pressure sore, a possible complication of SCI in which the integrity of a body structure (i.e., the skin) is compromised, her ability to engage in occupation could become significantly limited, requiring alternative approaches, such as positioning devices and adaptive equipment to compensate for the need to stay off the pressure sore.

The body function category of client factors refers to the physiological and psychological functions of the body. It includes a variety of systems, such as mental functions, sensory functions, and neuromusculoskeletal and movement-related functions. This category of body functions includes muscle function, which in turn includes muscle strength. A distinction is made between body functions and performance skills. As was described earlier, performance skills are observed as the client engages in an occupation or activity. The category of body function refers to the available ability of the client's body to function. For example, a client may have the available neuromuscular function (client factor of body function; specifically, muscle strength) to hold a comb and bring the comb to the top of the head, and also the strength to pull the comb through the hair, but when you ask the client to comb his hair (an activity), you observe that he has difficulty with manipulating the comb in his hand (motor skill of manipulation) and with using the comb smoothly to comb his hair (motor skill of flow). In the OTPF, these motor skills are considered performance skills.

In Keri's case, the absence of functioning muscles in her hands necessitates the use of a functional hand splint to access her phone or a credit card when engaged in her shopping occupation. To use a wrist-driven flexor hinge (i.e., tenodesis) hand splint to hold her phone, she must have adequate body function; in this case, fair or better muscle strength in her radial wrist

extensors. However, Keri also must have adequate performance skills, including the motor skills to exert enough force to adequately hold her phone while accessing information or when selecting a credit card.

The mental functions group includes emotional, cognitive, and perceptual abilities. This group also includes the experience of self and body image (see Chapters 6, 25, and 26). A client such as Keri, who has sustained a physically disabling injury, may have an altered self-concept, lowered self-esteem, depression, anxiety, decreased coping skills, and other problems with emotional functions after the injury<sup>24,25</sup> (see Chapter 6). Sensory functions and pain also are included in the body functions category (see Chapters 23 and 28).

Neuromuscular and movement-related functions refer to the available strength range of motion and movement (see Chapters 19 through 22); however, they do not refer to the client's application of these factors to activities or occupations, as was seen in the example of Keri accessing her credit card as part of engaging in the occupation of shopping. The body functions category also refers to the ability of the cardiovascular, respiratory, digestive, metabolic, and genitourinary systems to function to support client participation. These are further described in both the OTPF and the ICF. Table 9 in the OTPF presents a more detailed description of each function included in this category.<sup>5</sup>

#### THE OCCUPATIONAL THERAPY PROCESS

As mentioned, the OTPF consists of two parts, the domain and the process. From a very general perspective, the domain describes the scope of practice or answers the question, "What does an OT do?" The process describes the methods of providing OT services, or answers the question, "How does an OT provide occupational therapy services?"

The process is outlined briefly here for continuity; the reader is referred to Chapter 3 for a more in-depth discussion. The primary focus of the OTPF process is evaluation of the client's occupational abilities and needs to determine and provide services (intervention) that foster and support occupational performance (targeted outcomes). Throughout the process the focus is on occupation; the evaluation begins with determining the client's occupational profile, the analysis of occupational performance, and synthesis of the evaluation process along with the client's occupational history. Preferred intervention methods are occupation based, and the overall outcome of the process is achievement of the client's health, well-being, and participation in life through engagement in occupation. Throughout each step of the process, therapists are guided by the knowledge and skills learned and perfected over the course of their career, including the skills associated with clinical reasoning, therapeutic use of self, activity analysis, and activity demands. 9,11-12,24,29

Interventions also vary, depending on the client, whether person, groups, or populations. In the practice of occupational therapy with adults with physical disabilities, the term *client*, at the person or individual level, may vary, depending on the treatment setting or environment. In a hospital or rehabilitation center, the person might be referred to as a *patient*, whereas in a community college post-stroke program, the person receiving

occupational therapy may be referred to as a *student*. The term *client* or *consumer* might best describe the person who receives OT intervention at a center for independent living, where the individual typically lives in the community and seeks intervention for a specific, self-identified problem or issue.

## Skills That Inform and Guide the Occupational Therapy Process

As mentioned previously, the therapist is guided in the OT process by the knowledge and skills acquired during the course of the therapist's career; these skills include professional reasoning, therapeutic use of self, activity analysis, and activity demands.

Professional reasoning is described as the process that enables occupational therapy practitioners to identify the demands, skills and meanings of activities/occupations and understand "the interrelationships of the domain . . . that support client-centered interventions and outcomes" (OTPF-4, p. S21).<sup>5</sup> OTs rely on the expertise and knowledge they have developed throughout their careers, including understanding of theory, research interpretation, and clinical skills.

The OTPF describes the therapeutic use of self as "an integral part of the occupational therapy process . . . in which occupational therapy practitioners develop and manage their therapeutic relationship with clients by using professional reasoning, empathy, and a client-centered, collaborative approach to service delivery" (OTPF-4, p. S20). The professional literature describes an OT who is successful in the therapeutic use of self as having the qualities or attributes of showing empathy (including sensitivity to the client's disability, age, gender, religion, socioeconomic status, education, and cultural background); being self-reflective and self-aware; being able to communicate effectively using active listening; and consistently keeping a client-centered perspective, which in turn engenders an atmosphere of trust. 8-9,11-12,24,29

The focus of the OT process supports the therapeutic use of self by the OT. When the therapist uses a client-centered approach and begins the process with an evaluation that seeks information about the client's occupational history and occupational preferences, the client sees the therapist as being interested in what the client does (occupational performance), who the client is (contexts, and client factors such as values, beliefs, and spirituality), and what occupations give meaning to the client's life. (Part 4 of the Kent and Keri case study, presented later in the chapter, describes how Kent demonstrates therapeutic use of self in each step of the therapeutic process.)

The analysis of occupational performance is a critical part of the overall evaluation process and examines the "client's ability to effectively complete desired occupations" (OTPF-4, p. S22).<sup>5</sup> The analysis considers the importance of the occupation or activity to the client as paramount, bearing in mind the client's goals, interests, and abilities and the demands of the activity itself on body structures, body functions, performance skills, and performance patterns. Activity analysis and activity demands are inextricably linked; activity demands focus on what is required to engage in the activity or occupation. For the OT, this skill requires a knowledge of several aspects that must be addressed for a client to perform a specific activity, including

the activity's relevance and importance to the client, the objects used and their properties, space demands, social demands, sequencing and timing, required actions and performance skills, required body functions, and required body structures. Table 11 of the OTPF-4 document provides a comprehensive list of definitions and examples for a clearer understanding of each of these categories.<sup>5</sup>

Consider Keri's keen interest in resuming the occupation of shopping in the "real world" instead of online clothing purchases. The materials or tools needed are a phone with a payment app or credit card holder. The space demands are the accessibility of the store or shopping mall and the dressing room for Keri to try on the clothes before making a purchase. The social demands include paying for the items before leaving the store. The sequence and timing process includes being able to make a selection, go to the register, potentially wait in line, place the clothing on the counter, pay for the item, and then leave the store. The required actions refer to the performance skills necessary to engage in this activity, such as the coordination needed to try on clothing, the process skills needed to select one sweater or blouse from a large array of possible choices, and the social interaction skills needed to ask for assistance or directions if needed.

These performance skills are not viewed in isolation, but rather are seen as Keri engages in the occupation of clothes shopping. The required body functions and structures refer to the basic client factors necessary to perform the activity of shopping. The act of shopping requires a level of cognition or judgment because inherent in the activity of shopping is having the opportunity to make a choice among available items. Keri's ability to engage in the activity demand of making a choice of purchases indicates that she has an adequate level of cognition for shopping.

Using his skills of professional reasoning, therapeutic use of self, and expert knowledge of activity analysis and activity demands, Kent continually assesses the interplay of Keri's strengths and abilities and her occupational goals to select the interventions that will most effectively achieve these goals. These interventions are described next.

#### Types of Occupational Therapy Intervention

Table 1.1 shows the types of OT intervention typically used in physical disability practice and their relationship to the domain of occupational therapy. The general categories of intervention are presented in the OTPF, Table 12: Occupations and Activities, Interventions to Support Occupations (previously referred to as preparatory activities), Education and Training, Advocacy, Group Intervention, Virtual Intervention. These categories of intervention are not designed or organized in a hierarchy but provide a range of options to support the client's occupational engagement. The OT reflects on the client's goal of engagement in preferred, self-selected occupations and then collaborates with the client in selecting the type or types of intervention that would best help the client achieve each occupational goal.

Since the inception of the OTPF (continued in the OTPF-2 and OTPF-3), the traditional concept of "intervention levels" has been dismissed in favor of viewing interventions as types, with no one type considered more important than another;

	of OT Intervention Typically Used in Physical Disability Practice
Intervention	Description
Occupations and Activities	Occupations and activities selected as interventions for specific clients are designed to meet therapeutic goals and address the underlying needs of the client's mind, body, and spirit. To use occupations and activities therapeutically, the practitioner considers activity demands and client factors in relation to the client's therapeutic goals and contexts.
Occupations	Broad and specific daily life events that are personalized and meaningful to the client.
Activities	Components of occupations that are objective and separate from the client's engagement or contexts. Activities as interventions are selected and designed to support the development of performance skills and performance patterns and to enhance occupational engagement.
Interventions to Support Occupations	Methods and tasks that prepare the client for occupational performance are used as part of a treatment session in preparation for or concurrently with occupations and activities or provided to a client as a home-based engagement to support daily occupational performance. Includes PAMs and mechanical modalities; Orthotics and Prosthetics; Assistive technology and Environmental modification; Wheeled mobility; and Self-regulation,
Education and Training	
Education	Imparting of knowledge and information about occupation, health, well-being, and participation that enables the client to acquire helpful behaviors, habits, and routines.
Training	Facilitation of acquisition of concrete skills for meeting specific goals in a real-life, applied situation. Differentiated from education by its goal of enhanced performance as opposed to enhanced understanding.
Advocacy	Efforts directed toward promoting occupational justice and empowering clients to seek and obtain resources to support health, well-being, and occupational participation. Can be advocacy efforts by the practitioner on behalf of the client or self-advocacy efforts undertaken by the client.
Group Intervention	Use of distinct knowledge of the dynamics of group and social interaction and leadership techniques to facilitate learning and skill acquisition across the life span. Groups are used as a method of service delivery.
Virtual Intervention	Use of simulated, real-time, and near-time technologies for service delivery absent of physical contact such as telehealth or mHealth.

From the American Occupational Therapy Association: Occupational therapy practice framework: domain & process, ed 4, Am J Occup Ther 74(Suppl 2):S1–S87, 2020.

rather, each type has a potential contribution to make in facilitating the ultimate goal of achieving health, well-being, and participation in life through engagement in occupation.

#### **OT PRACTICE NOTES**

Throughout the OT process, the therapist should make sure the client understands that they will select the outcomes together, based on the client's choice, and they will collaborate in planning the intervention. This lays the foundation for a relationship based on caring and trust.

#### **Occupations and Activities**

In the first version of the OTPF (2002), the occupations and activities category of OT intervention was adapted from the section "Treatment Continuum in the Context of Occupational Performance" (Chapter 1) in the fifth edition of this textbook. In the OTPF-4, this category is defined as "interventions for specific clients, designed to meet therapeutic goals and address the underlying needs of the mind, body, and spirit. To use occupations and activities therapeutically, the practitioner considers activity demands and client factors in relation to the client's therapeutic goals and contexts" (OTPF-4, p. S59). Specific activities considered to be representative of the occupations and activities category are further separated into two types, including occupation and activity, that will each be discussed here.

#### THREADED CASE STUDY

#### Kent and Keri, Part 4

Kent did not originally regard therapeutic use of self as an integral, identified component of the OT process. However, through his study of the previous versions and current iteration of the OTPF, he has come to value it highly and use it in his practice. Clients respond well to Kent's caring and gentle approach. He enjoys the personal and interactive aspects of the therapeutic relationship, shows genuine interest in his clients' histories, and actively listens to their responses. He makes it a practice to introduce himself and explain his role to his clients as the first step in the OT process. This practice allows Kent to reinforce the primacy of the client's occupational participation and to associate and integrate the information about the client when providing occupational therapy services.

Kent practiced therapeutic use of self throughout the OT process with Keri. He brought to the process his 25 years of experience, continued education, and knowledge of SCI, in addition to his well-developed professional reasoning skills and his experiences in providing successful—and not-so-successful—OT intervention for numerous clients. Kent's college roommate and subsequent best friend has a physical disability, and this has served to increase Kent's understanding of, and inform his attitudes and beliefs about, the experience of having a disability. His close and loving relationships with his sisters, wife, and teenage daughters have provided him with an increased awareness of women's concerns and issues and have caused him to consider how disability might be experienced differently by clients. All of these aspects of Kent's personal and professional repertoire supported his ability to include therapeutic use of self, activity analysis, and professional reasoning as effective therapeutic skills that continually informed his actions throughout Keri's OT process.

The OTPF describes occupations (as interventions) as "Broad and specific daily life events that are personalized and meaningful to the client" (OTPF-4, p. S59). For Keri, an example might entail a clothes shopping trip using public transportation or independently completing a typical morning of office skills at the law firm.

Activities (as interventions) are "selected and designed to support the development of performance skills and performance patterns to enhance occupational engagement" (OTPF-4, p. S59).<sup>5</sup> Examples from Table 12 of the OTPF include selecting and manipulating clothing fasteners before engaging in dressing.

After reading the descriptions of occupations and activities as interventions, Kent now thinks that occupation-based intervention would promote engagement in all areas of occupation, including ADLs, IADLs, rest and sleep, education, work, play, leisure, and social participation. Most of the OT intervention for Keri was occupation based. To reach her targeted goal of resuming her favorite leisure occupation of clothes shopping, Kent and Keri took a trip to a nearby department store, where Keri looked for a blouse that buttoned up the front. Keri perused the racks, inspecting the blouses on display; asked for help from a salesperson; tried on blouses in the dressing room; made her selection; and paid for her purchase—all parts of a typical shopping excursion in a customary shopping environment. When necessary, Kent suggested ways Keri could perform some of the more difficult shopping activities with less effort, such as negotiating her wheelchair into the dressing room from a narrow hallway, and transporting the blouses on her lap without having them slide to the ground.

The purpose of activity as intervention in the OTPF and the examples provided helped Kent reframe or slightly reconfigure his view of the relationship between an activity and an occupation during intervention. He was providing activity intervention when he had Keri practice what she would encounter as part of the occupation of clothes shopping. In the OT clinic, before the shopping trip, Keri and Kent collaborated on developing her ability to perform the activities of accessing her credit card from her wallet or a payment app on her phone, using a button hook to button her sweater, and lifting clothes on hangers out of a closet. Some of the shopping activities she performed while buying her blouse were learned as part of other occupationbased interventions, such as wheelchair mobility and dressing. When using activity as intervention, the OT practitioner is concerned primarily with assessing and remediating deficits in performance skills and performance patterns.

#### Interventions to Support Occupations

These are the interventions used to prepare the client before engaging in the occupation or activity or simultaneously when engaging in the occupation or activity. This includes both preparatory methods and tasks.

**Preparatory methods** used in occupational therapy may include exercise, facilitation and inhibition techniques, positioning, sensory stimulation, selected physical agent modalities, and provision of orthotic devices, such as braces and splints. **Preparatory tasks** involve active participation of the client and

sometimes comprise engagements that use various materials to simulate activities or components of occupations. Preparatory tasks themselves may not hold inherent meaning, relevance, or perceived utility as standalone entities.

OT services for persons with physical disabilities often introduce these preparatory methods, devices, and tasks during the acute stages of illness or injury. When using these methods, the OT is likely to be most concerned with assessing and remediating problems with client factors such as body structures and body functions. It is important for the therapist to plan the progression of this type of intervention so that the selected methods are used as preparation for occupation or activity and are directed toward the overarching goal of achieving health, well-being, and participation in life through engagement in occupation.

Kent reflected that in preparing for Keri's occupation intervention of clothes shopping, he used several other interventions that would be considered preparatory methods. For example, he and Keri looked at her options for grasping items and decided on a tenodesis hand splint, using orthotics as an intervention. To use the splint more effectively, she needed increased wrist extensor strength, and to push her wheelchair or to reach for and lift hangers with clothes, she needed stronger shoulder muscles; therefore, the preparatory intervention of exercise was chosen to facilitate Keri's ultimate engagement in purposeful occupations and activities.

#### **Education and Training**

The OTPF-4 describes *education* as "imparting knowledge and information about occupation, health, well-being, and participation that enables the client to acquire helpful behaviors, habits, and routines" (OTPF-4, p. S61).<sup>5</sup>

Kent considered this definition, thinking of instances when he provided education as intervention. Most recently, with Keri, he responded to her concerns about returning to her job as an administrative assistant. She was having misgivings about the amount of physical work and energy involved; the modest salary she received, which barely covered her preinjury expenses; and the additional expenses she would have for personal and household assistance. Using his years of knowledge and experience, Kent provided an education-focused intervention to inform Keri about her options. He explained the services offered by vocational rehabilitation and described the possibilities and opportunities for further education to support her work goal of becoming an attorney—a job position, he pointed out, that held the potential for higher pay and one that could be less physically demanding than her administrative assistant position. Kent also provided Keri with information about her rights to employment accommodations under the ADA (see Chapter 15). He informed her about the similar circumstances with his former clients, describing the various scenarios and outcomes of each (being mindful to preserve the former clients' anonymity and privacy). He also drew on his wealth of experience to discuss the many resources available to facilitate such options. Keri was already preparing to resume her job (an occupational goal she prioritized) and was actively participating in OT by engaging in occupations and activities that involved her actual work occupations and supporting activities. The education intervention made her aware of her options but did not involve any actual performance of an activity.

Kent could use the same intervention process to educate Keri's vocational counselor and the law firm where Keri works.

In the OTPF-4, *training* is distinguished from education; it is described as "facilitation of the acquisition of concrete skills for meeting specific goals in a real-life, applied situation. In this case skills refers to measurable components of function that enable mastery. Training is further differentiated from education by its goal of enhanced performance as opposed to enhanced understanding, although these goals often go hand in hand" (OTPF-4, p. S61). Examples of training include interventions such as teaching a personal care attendant ways to help a client with ADLs.

Kent considered that he provided training when he taught Keri how to complete her administrative assistant duties by showing her how to access files, operate her environmental controls system, and dictate notes using voice recognition software. Kent anticipates training Keri in how to manage her bladder (empty her leg bag), perform regular weight shifts, and access the cafeteria at work—all skills that are part of Keri's personal care in the work setting that she wants to master before returning to full-time employment.

#### **Advocacy**

The intervention type identified as advocacy is provided when efforts are "directed toward promoting occupational justice (access to occupation) and empowering clients to seek and obtain resources to support health, well-being, and occupational participation" (OTPF-4, p. S61).<sup>5</sup> Kent worked with Keri and her work supervisor to advocate to the law firm partners for reasonable accommodations to support Keri's continued employment. After a year of Keri's successful job performance and her newly learned abilities to continually self-advocate, Kent and Keri were invited to the state bar association conference to advocate for similar collaborations on behalf of other employees with disabilities.

#### **Group Intervention**

Group intervention is described as functional groups, activity groups, task groups, social groups, and other groups used in healthcare settings within the community or within organizations that allow clients to explore and develop skills for participation, including basic social interaction skills and tools for self-regulation, goal setting, and positive choice making<sup>5</sup> (OTPF-4, p. S62).

In reflecting on Keri's OT process, Kent concluded that perhaps one of the most important interventions for Keri was the Home and Community Skills classes offered by the OT department during her rehabilitation stay. This eight-session experiential group class, led by Kent and several of his OT colleagues, introduced topics such as managing friendships, negotiating occupations in the environment (e.g., going to movie theaters, hair salons, or grocery stores), asking for assistance, dating, childrearing, and using public transportation, to name but a few. Former clients who had achieved their goal of health, wellbeing, and participation in life through engagement in occupation were invited as peer experts to provide the lived experience for the discussions facilitated by the therapists. In addition to talking about issues (as an OT intervention), Kent made sure

that each client had follow-up opportunities for "doing" the occupations and activities.

A year or so after her SCI, Keri was invited to return to the Home and Community Skills group and share her experiences of returning to work, seeking accessible housing, and beginning a new intimate relationship. Kent facilitated the discussion. He used his professional reasoning skills and knowledge of these topics, along with activity analysis and activity demands, to ask Keri strategic questions, to make sure the discussion included specific details, and to point out alternative solutions that others in the class might have found more applicable.

Kent carefully studied the OTPF domain, process, and types of interventions and reinforced his learning by applying this knowledge to his own circumstances and those of his client Keri. However, Kent still feels the need for additional suggestions or strategies for learning the Framework more thoroughly. The next section explores these strategies.

#### STRATEGIES FOR LEARNING THE OTPF-4

The most effective first step in learning the OTPF-4 would be to obtain and thoroughly read the published document, making notations as points arise, drawing diagrams for increased understanding, writing questions or observations in the margins, and consulting tables, figures, and the glossary, when directed to do so, to reinforce or clarify information.<sup>5,8</sup> The OTPF-4 is a comprehensive conceptualization of the profession, and it requires a substantial investment of time and commitment to study and integrate it into practice before a therapist will feel comfortable using it. Box 1.1 provides an abbreviated list of the core terminology and concepts of the OTPF-4; this can serve as a quick reference or can be used to jog the reader's memory in learning to use the OTPF-4.

More experienced OTs who are accustomed to using the previous iterations of the OTPF will find it helpful to consult the Preface in the OTPF-4 (pp. S1–S4), where changes and major revisions to the OTPF are listed and discussed.<sup>5</sup>

Several pioneering authors<sup>7,10,17,25,26,28</sup> have written helpful articles demonstrating application of the Framework for the AJOT's various Special Interest Section (SIS) quarterlies or OT Practice articles.<sup>17</sup> Writing for the *Home and Community Health SIS Quarterly*, Siebert<sup>28</sup> encouraged practitioners to realize that it is important to use the OTPF "as a tool to communicate practice, to support practice patterns that facilitate engagement in occupation, and to reflect on and refine our practice." She also pointed out the dominant role that context plays in home and community practice by providing continuity to the client, noting how firmly the Framework supports this concept. She expressed her belief that the OTPF's focus on occupation, in addition to beginning the process with the client's occupational profile, ensures that the results of OT intervention will matter to the client.<sup>28</sup>

Coppola,<sup>10</sup> writing for the *Gerontology SIS Quarterly*, described how the Framework can be applied to geriatric practice and explained that the evaluation is one of occupational therapy's most powerful means of informing others (including clients and colleagues) what OT is and what OT does. She provided a working draft of an Occupational Therapy Evaluation Summary form, which was developed to be incorporated into

#### BOX 1.1 Quick Guide to the Occupational Therapy Practice Framework

### Achieving Health, Well-Being, and Participation in Life Through Engagement in Occupation: The OT's Unique Contribution, the Overarching Theme of the Domain, and the Overarching Outcome of the Process

Occupational therapists (OTs) use their knowledge and expertise in the therapeutic use of self and in activity analysis and activity demands (space demands, social demands, sequencing, and timing), in addition to critical thinking skills, to guide their actions throughout each step of the occupational therapy (OT) process. Clients (persons, groups, populations: Table 1 of OTPF-4) contribute their life experiences, knowledge, and expertise to the process in collaboration with the OT.<sup>10,21</sup>

The OTPF-4 is composed of two primary interrelated parts: domain and process. These major elements are enhanced and supported by additional parts of the OTPF.

**Domain:** What (OTs) do—no single aspect is considered more critical than another.

- Performance of occupations (activities of daily living [ADLs], instrumental
  activities of daily living [IADLs], health management, rest and sleep, education, work, play, leisure, and social participation: Table 2 of the OTPF-4).
- Contexts (Environmental factors: Table 4 of the OTPF-4, Personal factors: Table 5 of the OTPF-4).
- Performance patterns (habits, routines, roles, and rituals: Table 6 of the OTPF-4).
- Performance skills (motor skills, process skills, and social interaction skills: For persons—Table 7 of the OTPF-4, for groups—Table 8 of the OTPF-4).
- Client factors (values, beliefs and spirituality, body functions, and body structures: Table 9 of the OTPF-4).

**Process:** How OTs provide their services—collaborative process between client and OT

- Evaluation (occupational profile and analysis of occupational performance).
- Intervention (preferred term rather than treatment—includes intervention plan, intervention implementation, and intervention review).
- Targeted outcomes (all goals aimed at the overarching goal of achieving health, well-being, and participation in life through engagement in occupation).

Client: Recipient of OT services (client is the preferred term, but the term used varies by practice setting—could be patient, student, consumer, employee, employer, and so on)

- Individual (broad view of client—could be the actual person with a disability or an individual providing support for the client, such as a family member, caregiver, teacher, or employer, who also may help or be served indirectly).
- Groups (collection of individuals having shared characteristics and/or common or shared purpose).
- · Populations (within a community).
- Client-centered approach—an approach to the evaluation of the need for and
  provision of an intervention with emphasis on the client and his or her goals.
- Occupation versus activity—Activities are characterized as meaningful and goal directed but not of central importance to the life of the individual.

Occupations are viewed as activities that give meaning to the person's life and contribute to his or her identity; they are also the activities in which the individual looks forward to engaging.

**Engagement:** Includes both the subjective (emotional or psychological) and objective (physically observable) aspects of performance.

#### Types of Intervention

#### Occupations and Activities

- Occupations—client-directed daily life activities that match and support or address identified participation goals.
- Activities—actions that support the development of performance skills and patterns to enhance occupational engagement; client learns and practices parts or portions of occupations.

#### Interventions to Support Occupations

- Preparatory methods—modalities, devices, and techniques to prepare client for occupational performance; includes splints, assistive technology and environmental modifications, and wheelchair mobility.
- Preparatory tasks—actions to target specific client factors or performance skills

#### **Education and Training**

- Education—OT imparts knowledge and information about occupation, health, well-being, and participation that enable the client to acquire helpful behaviors, habits, and routines, which may or may not require application at the time of the intervention session.
- Training—facilitation of acquisition of concrete skills for meeting specific goals in a real-life, applied situation. Differentiated from education by its goal of enhanced performance as opposed to enhanced understanding.

#### Advocacy

 Advocacy—promotes occupational justice and empowers clients to obtain resources for full participation in occupation. Can be advocacy efforts by the practitioner on behalf of the client or self-advocacy efforts undertaken by the client.

#### **Group Interventions**

Group interventions—use of distinct knowledge and leadership techniques to
facilitate learning and skill acquisition across the lifespan through the dynamics of group and social interaction. Groups also may be used as a method of
service delivery.

#### Virtual Interventions

Virtual interventions—use of simulated, real-time, and near-time technologies for service delivery absent of physical contact such as telehealth or mHealth.

the Framework and to highlight occupation in a visual way into her practice in a geriatric clinic. This summary form is unconstrained by the more traditional documentation forms that seem to bury occupation under diagnostic and clinical terminology.<sup>10</sup>

Similarly, Boss<sup>7</sup> offered readers of the *Technology SIS Quarterly* his reflections on how the Framework can be operationalized in an assistive technology setting. Addressing each of the categories of the domain, he offered examples of how assistive technology supports engagement in occupation (allowing

completion of an activity or occupation) and how the use of assistive technology (personal device care and device use) can be an occupation in and of itself. He concluded his article by pointing out that "assistive technologies are all about supporting the client's participation in the contexts of their choice and are therefore part of the core of occupational therapy."

Although the previously cited articles refer to use of the original OTPF, they thoroughly demonstrate how creatively the Framework, now referred to as simply the OTPF, can be applied

to the array of OT practice settings. Another strategy for facilitating the reader's education in the OTPF-4 is the format of the chapters in this book, as described next.

#### THE OTPF-4: ITS USE IN THIS BOOK

In keeping with the OTPF-4's central focus on the client and the importance of contexts and participation in occupation, each chapter begins with a case study and then integrates the information presented into the consideration of that client and those circumstances, similar to Kent's and Keri's experiences as described and threaded throughout this chapter. As the particular content information is presented, the reader frequently is asked to refer back to the case study and consider how the information applies to the specifics of the client portrayed. The probative questions asked at the conclusion of Part 1 of the case study are answered throughout the text or addressed at the end of the chapter.

#### **SUMMARY**

"Occupational Therapy Practice Framework: Domain and Process," the first article on this model, was published in 2002 by the AOTA. The subsequent editions, OTPF-2, OTPF-3, and the current version, OTPF-4, were developed by the OT profession for two purposes: to reassert occupational therapy's focus on occupation and to clearly articulate and enhance understanding of the domain of occupational therapy (what OT practitioners do) and the process of occupational therapy (how they do it) for both internal audiences (members of the profession) and external audiences (clients, healthcare professionals, and interested others). The overarching goal of OTPF-4 is "achieving health, well-being, and participation in life through engagement in occupation" — this emphasizes the primacy of occupation, regarding it as both the theme of the domain and the outcome of the process.

The domain comprises five categories that constitute the scope of occupational therapy: occupations, client factors, performance skills, performance patterns, and contexts. The OT process involves three interactive phases of OT services—evaluation, intervention, and outcomes—that develop in a collaborative and nonlinear manner. The types of OT intervention included in the OTPF-4 and typically used in physical disabilities practice settings include occupations and activities (including occupation-based activity and purposeful activity); interventions to support occupations (including modalities, devices, and techniques to prepare the client for occupational performance, orthotics and prosthetics, assistive technology and environmental modifications, and wheeled mobility, including seating and positioning); education and training; advocacy (by the practitioner and also by the client as self-advocacy); group intervention; and virtual interventions.<sup>5</sup>

In addition to studying the chapter, readers are encouraged to explore the OTPF-4 in its entirety and to reinforce their learning by applying it to their own life experiences and those of their clients, meaning both the clients in the case studies presented throughout this book and those they encounter in real life in the clinic.

#### REVIEW QUESTIONS

- **1.** Briefly describe the evolution of the Occupational Therapy Practice Framework, including the OTPF-4.
- **2.** Describe the need for the OTPF-4 in the practice of OT for persons with physical disabilities.
- **3.** Describe the fit between the OTPF-4 and the ICF and explain how they inform and enhance the OT's understanding of physical disability.
- **4.** List and describe the components that make up the OT domain, and give examples of each.
- **5.** List and describe the components that make up the OT process, and give examples of each.
- **6.** Briefly describe the OT intervention levels, and give an example of each as it might be used in a physical disability practice setting.

#### **REFERENCES**

- American Occupational Therapy Association: Uniform terminology for occupational therapy, ed 3, Am J Occup Ther 48:1047, 1994.
- 2. American Occupational Therapy Association: Occupational therapy practice framework: domain and process, Am J Occup Ther 56(6):609, 2002.
- 3. American Occupational Therapy Association: Occupational therapy practice framework: domain and process, ed 2, *Am J Occup Ther* 62(6):625–683, 2008.
- American Occupational Therapy Association: Occupational therapy practice framework: domain and process, ed 3, Am J Occup Ther 68(Suppl 1):S1–S48, 2014.

- 5. American Occupational Therapy Association: Occupational therapy practice framework: domain and process, ed 4, *Am J Occup Ther* 74(Suppl 2):S1–S48, 2020.
- Bedell GM: Measurement of social participation. In Anderson V, Beauchamp MH, editors: *Developmental social neuroscience* and childhood brain insult: theory and practice, New York, 2012, Guilford Press, pp 184–204.
- Boss J: The occupational therapy practice framework and assistive technology: an introduction, *Technol Special Interest Section Quarterly* 13(2):1–3, 2003.
- 8. Boyt Schell BA, et al: Glossary. In Boyt Schell BA, Gillen G, Scaffa M, editors: *Willard and Spackman's occupational therapy*, ed 12, Philadelphia, 2014, Lippincott Williams & Wilkins, p 607.

- 9. Cara E: Methods and interpersonal strategies. In Cara E, MacRae A, editors: *Psychosocial occupational therapy: a clinical practice*, Clifton Park, NY, 2005, Thomson/Delmar Learning, p 359.
- 10. Coppola S: An introduction to practice with older adults using the occupational therapy practice framework: domain and process, *Gerontol Special Interest Section Quarterly* 26(1):1–4, 2003.
- 11. Crabtree JL, et al: Cultural proficiency in rehabilitation: an introduction. In Royeen M, Crabtree JL, editors: *Culture in rehabilitation: from competency to proficiency*, Upper Saddle River, NJ, 2006, Pearson/Prentice Hall, p 1.
- 12. Crawford K, et al: *Therapeutic use of self in occupational therapy, unpublished master's project*, San Jose, CA, 2004, San Jose State University.
- 13. Delany JV, Squires E: From UT-III to the framework: making the language work, *OT Practice* 20, May 10, 2004.
- 14. Dunn W: Best practice occupational therapy: in community service with children and families, Thorofare, NJ, 2000, Slack.
- Fisher AG, Marterella A: Powerful practice: A model for authentic occupational therapy, Fort Collins, CO, 2019, Center for Innovative OT Solutions.
- 16. Gutman SA, et al: Revision of the occupational therapy practice framework, *Am J Occup Ther* 61:119–126, 2007.
- 17. Hunt L, et al: Putting the occupational therapy practice framework into practice: enlightening one therapist at a time, *OT Practice* 12:18–22, 2007.
- 18. Khetani MA, Coster W: Social participation. In BA Boyt Schell & G Gillen, editors: *Willard and Spackman's occupational therapy*, ed 13, Wolters Kluwer.
- 19. Law M, et al: Core concepts of occupational therapy. In Townsend E, editor: *Enabling occupation: an occupational therapy perspective*, Ottawa, ONT, 1997, CAOT, p 29.
- 20. Lynch A, Moore A: Play as an occupation in occupational therapy. *Br J Occup Ther* 2016, 79(9) 519–520, 2006. DOI: 10.1177/0308022616664540.
- Magasi S, Hammel J: Social support and social network mobilization in older African American women who have experienced strokes, *Disabilities Studies Quarterly* 24(4), 2004. http://dsq-sds.org/article/view/878/1053.
- 22. Nelson DL: Critiquing the logic of the domain section of the occupational therapy practice framework: domain and process, *Am J Occup Ther* 60:511–523, 2006.
- 23. Parham LD, Fazio LS, editors: *Play in occupational therapy for children*, St Louis, 1997, Mosby.

- 24. Peloquin S: The therapeutic relationship: manifestations and challenges in occupational therapy. In Crepeau EB, Cohn ES, Schell BAB, editors: *Willard and Spackman's occupational therapy*, ed 10, Philadelphia, 2003, Lippincott Williams & Wilkins, p 157.
- Pendleton HMH, Schultz-Krohn W: Psychosocial issues in physical disability. In Cara E, MacRae A, editors: *Psychosocial* occupational therapy: a clinical practice, ed 3, Clifton Park, NY, 2013, Delmar/Cengage Learning, p 501.
- 26. Puchalski *C*, et al: Improving the quality of spiritual care as a dimension of palliative care: the report of the Consensus Conference, *J Palliat Med* 12(10):885–904, 2009. https://doi.org/10.1089/jpm.2009.0142.
- Roley SS, Delany J: Improving the occupational therapy practice framework: domain and process: the updated version of the framework reflects changes in the profession, *OT Practice*, February 2, 2009.
- 28. Siebert C: Communicating home and community expertise: the occupational therapy practice framework, *Home Community Special Interest Section Quarterly* 10(2), 2003.
- 29. Taylor RR, Van Puymbrouck L: Therapeutic use of self: applying the intentional relationship model in group therapy. In O'Brien JC, Soloman JW, editors: *Occupational analysis and group process*, St Louis, 2013, Elsevier, pp 36–52.
- 30. World Health Organization: International classification of functioning, disability, and health, Geneva, 2001, WHO.
- 31. Youngstrom MJ: The occupational therapy practice framework: the evolution of our professional language, *Am J Occup Ther* 56:607, 2002.

#### SUGGESTED READINGS

- Christiansen CH, Baum CM, editors: Occupational therapy: enabling function and well-being, Thorofare, NJ, 1997, Slack.
- Law M: Evidence-based rehabilitation: a guide to practice, Thorofare, NJ, 2002, Slack.
- Law M, et al: Occupation-based practice: fostering performance and participation, Thorofare, NJ, 2002, Slack.
- Youngstrom MJ: Introduction to the occupational therapy practice framework: domain and process, AOTA continuing education article, OT Practice September: CE1-7, 2002.

### History and Practice Trends in Physical Dysfunction Intervention

Deborah J. Bolding<sup>a</sup>

#### LEARNING OBJECTIVES

After studying this chapter, the reader will be able to do the following:

- 1. Trace the ideas, values, beliefs, and people that influenced the development of occupational therapy for persons with illness and physical disabilities in the United States (U.S.).
- 2. Consider the development of occupational therapy within the larger context of U.S. and global scientific, cultural, social, economic, political, and legislative forces.
- Explore changes in the practice of occupational therapy over the decades.

#### **CHAPTER OUTLINE**

Foundations of Occupational Therapy, 18

The Progressive Era (1890s-1920s), 18

Moral Treatment Movement, 18

Arts and Crafts Movement (1895-1920), 19

Pragmatism Movement (1870s-1940s), 19

Medical and Scientific Models of Healthcare, 19

Treating Persons With Illness and Injury in the Early Years of the Profession, 20

The Rehabilitation Model, 20 Expansion and Specialization, 22

Theory-Practice Gap, 23 Postmodern Philosophy, 24

Using History to Understand Today's Practice, 25

#### **KEY TERMS**

Arts and crafts movement
Diversional therapy
Moral treatment
Occupational Therapy Practice Framework
Postmodern philosophy

Pragmatism movement Progressive Era Social model of disability Tuberculosis

This chapter will examine some of the people, ideas, events, and movements that influenced the early practice of occupational therapy for persons with medical conditions and physical disabilities. It surveys the expanding role of occupational therapists through subsequent decades, the transformation of practitioners from technicians to professionals, and the subsequent growth and changes in the profession in the areas of injury, illness, health, and wellness. The eminent occupational therapy historian, Kathleen Barker Schwartz, stated that the purpose of history is to "elucidate connections in the hope that we can learn from our rich past and feel more related to it."65 It is hoped that readers of this chapter will develop an affinity to the values of occupational therapy that have been consistent over the 100 plus years of the profession and the changes in response to advances in medicine and within the larger context of U.S. and global scientific, cultural, social, economic, political, and legislative forces. To facilitate the reader's understanding of the evolving nature of occupational therapy (OT) practice, three case studies are presented, each of which is illustrative of an important era in occupational therapy history. Of note, occupational therapy developed in the United States and other Western countries, and the movements and philosophical ideas discussed in this chapter reflect the history of the profession. Readers are encouraged to explore other important cross-cultural perspectives on occupational therapy that are shaping the future of occupational therapy globally, such as those expressed by Rafeedie and Russow (see Chapter 6) and the review article and references by Mahoney and Kiraly-Alvarez (2019).<sup>46</sup>

<sup>&</sup>lt;sup>a</sup>The author acknowledges the contributions of Kathleen Barker Schwartz, EdD, Emeritus Professor, San José State University, as the author of earlier editions of this chapter and for some of the content of the current edition of this chapter. Any omissions or errors are those of this author.

#### FOUNDATIONS OF OCCUPATIONAL THERAPY

Occupational therapy emerged in response to societal and healthcare changes in the United States and the world in the early part of the 20th century. Individuals with illness and injury until this period were often cared for at home or in institutions. Reasons for this were to protect the community from communicable diseases, because the physical environment was not accessible to persons with disabilities, or because of ignorance, fear, and stigma or outward signs of social unacceptability which resulted in discrimination. For example, cities in the United States in the 1880s and 1890s had laws prohibiting public appearances by people who were "diseased, maimed, deformed."67 These perspectives began to change with advances in medicine and surgery that created new medical models of care, and by progressive reformers who wanted to help persons with disability reclaim their place in the community and the workplace.82

#### The Progressive Era (1890s–1920s)

The Progressive Era, spanning the period from the 1890s to the 1920s, was a time of social activism and reform in the United States. Cities were undergoing rapid industrialization. The majority population was shifting from rural to urban as a result of an agrarian depression, and there was also an influx of immigrants from other countries. These changes resulted in urban conditions of poverty, slums, hunger, homelessness, and exploitation of labor. Cholera, tuberculosis, smallpox, diphtheria, measles, and polio were only some of the communicable diseases which were rampant and resulted in chronic health conditions for city inhabitants. Reformists called for legislation to prevent child labor, protect workers, and provide accident insurance for injured workers and their families; penal reform; women's suffrage; and expanded charitable services for the poor. Through membership in clubs and charitable organizations, women gained leadership abilities and spearheaded many of the social reform initiatives.<sup>56</sup> The settlement house movement was one of the important ways in which women were leaders in creating change.

Settlement houses, first developed in Great Britain, were established in the United States to address social problems resulting from poverty, unsanitary living conditions, and exploitation. Members of more privileged White families, in particular young women, "settled" in immigrant and impoverished communities to help organize education about hygiene, health, work skills, and language and to develop daycare, recreational, vocational, and social activities. Settlers often became advocates for social reform and made contributions to areas such as education, public health, legal aid, housing, and parks.<sup>29</sup> The settlement houses played key roles in many U.S. cities, although they were later criticized because of volunteers' conscious attempts to teach White, middle-class, and religious values and reports of prejudice or ethnic stereotyping.<sup>29</sup>

Hull House, founded in Chicago by Jane Addams and Ellen Starr Gates in 1889, is a settlement house of particular importance to occupational therapy history. The Chicago School of Civics and Philanthropy, established at Hull House in 1908, created early courses to teach attendants and nurses about the efficacy of using occupations and amusements with patients with mental illness.<sup>59</sup> An occupational therapy founder, Eleanor Clarke Slagle, was a student in one of the courses, and was later recruited by the school and the Illinois Society for Mental Hygiene to develop an occupational center for people with mental and orthopedic disabilities in 1915. The workshop taught skills such as furniture making, sewing, rug weaving, toy-making, and other crafts often referred to as occupations at the time. Proceeds from sales of the work went to the clients, who would otherwise have been unemployable.<sup>61</sup> Before and during this period a philosophy of humane treatment of those with disabilities was simultaneously emerging, as will be discussed in the next section.

#### **Moral Treatment Movement**

The moral treatment movement for persons with mental and physical illnesses emerged from humanistic philosophy originating in late 18th-century Europe and was promoted by physician Philippe Pinel of France and philanthropist Samuel Tuke of England. This movement represented a shift in thinking from a pessimistic viewpoint that labeled the mentally ill as subhuman and incurable to an optimistic one that viewed the mentally ill as capable of reason when treated humanely. Strengths of the moral treatment movement were its respect for human life, belief in the unity of mind and body, and the recognition that health and well-being were affected by physical and social environments. 45,66

The movement emphasized a homelike atmosphere for hospitals and asylums where patients could be cared for "with respect and kind treatment upon all circumstances, and in most cases manual labor, attendance at religious worship on Sunday, the establishment of regular habits of self-control, [and] diversion of the mind from morbid trains of thought."<sup>45</sup> Engagement in occupations was key to the program and included music, exercise, art, agriculture, carpentry, painting, and manual crafts.<sup>66</sup>

Both private and public asylums were created based on the moral treatment model. Private institutions were typically for middle- and upper-class clients. Patients in public institutions were often classified by class, sex, degree of illness, behavior, and ability to pay for services. For example, men engaged more in agriculture, carpentry, and other physical tasks, whereas women performed domestic chores and crafts. The "curable" clients engaged in reading, writing, music, and other educational and cultural pursuits, whereas "incurables" engaged in manual pursuits.<sup>52</sup>

Although the moral treatment movement reported early success with patients, public institutions became overwhelmed with chronic patients, overcrowding, and communicable diseases and were challenged to provide the humane treatment that was their initial goal. Moral treatment was also limited by its narrow focus on the values of the dominant culture of the place and era (often based on Protestant beliefs), which did not meet the needs of many immigrants. By the end of the 19th century, advances in surgical and medical treatments served to decrease the influence of moral treatment in hospitals. Psychiatric institutions, however, continued to retain elements of moral treatment, including the use of occupations as treatment. Associated with the surface of the surfac

One positive outcome of the moral treatment movement was the recognition that occupation, or the "proper use of time in some helpful and gratifying activity," was considered fundamental to care for psychiatric patients at the turn of the century.<sup>48</sup> Coinciding with this belief in the fundamental need for meaningful occupation was resistance to what were considered the dehumanizing effects of the industrial revolution, as will be discussed in the next section.

#### **Arts and Crafts Movement (1895–1920)**

The arts and crafts movement developed in Europe and the United States as a reaction to the mass-produced goods created by the Industrial Revolution. The movement represented a longing, primarily among the socially advantaged, for a return to the use of natural materials and processes and simple designs. <sup>42</sup> Arts and crafts societies were established with the belief that "true work fixes attention, develops ability, and enriches the life; it strengthens the mind, forms the will, and inures to patience and endurance." <sup>80</sup>

Members of the arts and crafts movement developed programs for persons with physical and mental disabilities to develop discipline and improve worker roles.<sup>64</sup> A strong proponent for the use of arts and crafts in patient care was Dr. Herbert Hall, an occupational therapy founder who in 1904 developed a treatment program he called the "work cure." Although best known for working with neurasthenia (chronic fatigue) patients, he set up training programs for women to teach crafts in schools, sanatoriums, and hospitals, and created industries to help people with physical disabilities such as cardiac disease and arthritis become self-supporting. George Barton, another occupational therapy founder, credited the application of the principles from the arts and crafts movement with helping him regain function after contracting tuberculosis and also later when he developed paralysis of his left side.<sup>64</sup>

The therapeutic value of handicrafts was their ability to provide occupations that stimulated "mental activity and muscular exercise at the same time." Handicrafts could be graded for the desired physical and mental effects. During World War I, occupational therapy "reconstruction aides" successfully used crafts for the physical and mental restoration of disabled servicemen. Another example is the treatment for persons with tuberculosis, in which occupational therapists started with a graduated approach that began with bedside crafts and habit training and proceeded to occupations related to shop work and ultimately actual work. The use of arts and crafts for restoration also fit into the pragmatism philosophers' view that persons needed to be challenged and engaged to live up to their potential, as discussed in the next section.

#### **Pragmatism Movement (1870s–1940s)**

**Pragmatism** was an important philosophy during the early 20th century, with proponents arguing that it was through doing or actions, being confronted with obstacles, making choices, and experiencing that an individual's potential was realized. John Dewey, a psychologist, educator, and philosopher, stressed the importance of people learning by doing.<sup>77</sup> He postulated that learning occurs in the context of one's past experiences, the

environment in which the event takes place, and one's level of engagement.<sup>32</sup> Susan Tracy and Eleanor Clarke Slagle, early occupational therapists, cite the influence of John Dewey on their work.<sup>11,49</sup> They and other occupational therapists similarly recognized the importance of assessing clients' values, experiences, and context to help establish more effective intervention plans and programs.

Another pragmatist philosopher, William James, thought habits were created by repetition of meaningful actions. When a habit is created, the person can complete an activity with decreased cognitive load, allowing them to focus on more important tasks.<sup>33</sup> Eleanor Clarke Slagle applied the principle of habit training to help psychiatric patients develop more organized behaviors. Clients followed an organized schedule during the day, and activities were chosen to help patients take their minds off their illness and focus on their productive pursuits.<sup>9,53</sup>

The first occupational therapists (primarily nurses, social workers, and craft teachers) and their supporters thought that occupations, which at that time were primarily arts and crafts, aided in both the physical and psychological recovery of their patients. They demonstrated the value of their ideas to patients and physician allies, and the profession began to spread to an increasing number of settings, as discussed in the next section.

#### **Medical and Scientific Models of Healthcare**

Until the 20th century, hospitals in the United States were established primarily to isolate people with contagious diseases (e.g., smallpox or leprosy) and to care for poor, homeless, chronically ill, disabled, those with mental illnesses that might be dangerous to the community, and the dying.<sup>57</sup> As people began immigrating to cities in the United States and Canada from rural areas or other countries, they often lacked family and financial support for home care and increasingly turned to hospital care. 23,63 At about the same time, Frederick Taylor, a prominent engineer, introduced his theory of scientific management. He proposed that rationality, efficiency, and systematic observation could be applied to industrial management and all other areas of life, including teaching, preaching, and medicine.74 Progressive reformers of the period supported his ideas and urged hospitals to adopt a more scientific approach to medicine and hospital operations.

Medical care in hospitals was also becoming safer and more effective because of advances in medicine, surgery, and infection control. Hospital administrators ran the business, seeking governmental and community support and offering amenities such as hot meals and semi-private rooms to attract middle-class patients, with physicians supervising all aspects of patient care. Al,63 Occupational therapists worked in hospitals under the direction of physicians who prescribed therapy just as they would medication. Dunton, a physician himself, supported this arrangement, saying, "The occupational therapist, therefore, has the same relation to the physician as the nurse, that is, she [sic] is a technical assistant."

The founders of occupational therapy were attracted to the idea of a scientific approach to treatment, and by 1920 were calling for the profession to promote the notion of the "science" of occupation by calling for "the advancement of occupation as a

therapeutic measure, the study of the effects of occupation upon the human being, and the dissemination of scientific knowledge on this subject." Barton was particularly taken with Taylor's time and motion studies and thought these might provide a model for occupational therapy research. Similarly, Slagle urged research in occupational therapy to validate its efficacy, and Dunton advocated that practitioners should be educated to engage in systematic inquiry in order to further the profession's goals. <sup>19,70</sup>

Although the founders advocated a scientific approach, there is little evidence to suggest that occupational therapy practice during this period was informed by systematic observation. One exception was the Department of Occupational Therapy at Walter Reed Hospital in Washington, D.C., under the direction of psychologist Bird T. Baldwin.66 Occupational therapy "reconstruction aides" were assigned to the orthopedic ward, where methods of systematically recording range of motion and muscle strength were established. Activities (typically arts and crafts) were selected based on motion analysis, including joint position, muscle action, and muscle strengthening. Methods of adapting tools were suggested, and splints were fabricated to provide support during the recovery process. Treatment with this systematic approach was narrowly focused but was applied within the context of what Baldwin called "functional restoration," in which the occupational therapist's purpose was to "help each patient find himself and function again as a complete man [sic] physically, socially, educationally, and economically.66

#### Treating Persons With Illness and Injury in the Early Years of the Profession

In the first part of the 20th century, craft teachers were commonly employed to work with patients in mental hospitals, although the practice was not common for medical facilities.<sup>20</sup> Susan Tracy, a nurse and occupational therapy founder, observed that surgical patients seemed happier when occupied and that activities helped restore strength and range of motion to joints and addressed other physiological problems.<sup>36</sup> Other occupational therapy advocates recognized that the mind of the sick person, especially during the prolonged hospitalization, caused worry, confusion, and negative thinking that affected one's spirit.<sup>28,36</sup>

In 1906, Tracy developed an invalid occupations course for nurses on a continuum from acute care to convalescence and return to work.<sup>54</sup> She thought that nurses, because of their medical training, were best suited to teach occupations in the sickroom or hospital shop, although she also supported the use of craft instructors with the convalescent patient.<sup>54</sup> Her book, Studies in Invalid Occupations, provided comprehensive suggestions for working with patients who could only use one hand, were without vision, were confused, or had other physical or cognitive conditions.<sup>79</sup> The book also described strategies for working in a variety of settings, including the homes of those who were socially and economically disadvantaged.<sup>42</sup> Nine additional courses of occupational therapy were created by nurses and social service workers between 1908 and 1916.60 The new profession recruited educated young women, often from nursing, social work, and teachers of arts and crafts.<sup>56</sup> Practitioners and supporters corresponded through informal networks until 1917, when the National Society for the Promotion of Occupational Therapy (NSPOT) was established.

William Rush Dunton, a psychiatrist in charge of patient occupations at Sheppard and Enoch Pratt Hospital in Maryland, and George Barton, a strong supporter of occupational therapy because of personal illness and injury-which he thought responded positively to occupation—arranged the inaugural meeting of NSPOT to incorporate the new society. Eleanor Clarke Slagle, who directed the occupational therapy program at the Phipps Clinic at Johns Hopkins Hospital and had established the Henry B. Favill School of Occupations in Chicago, was an invitee. Also attending the organizational meeting were Susan Cox Johnson, Director of Occupations for the Department of Public Charities in New York City; Thomas Kidner, an architect and Vocational Secretary of the Canadian Military Hospital Commission, and Isabel Gladwin Newton as secretary. Susan Tracy was invited but unable to attend the first meeting.<sup>59</sup> Dr. Edward Hall, who is also considered a founder of the profession, was purposely not invited by George Barton who planned the founding meeting. The first annual meeting of association was held a few months later (September 1917) in New York City, with 26 attendees.<sup>59</sup>

The NSPOT organizers were cognizant that the United States was being drawn into World War I, and thought occupational therapists (or reconstruction aides, as they were called by the military) could provide a valuable service to their country and the war wounded. Only days after the OT inaugural meeting, the United States entered WWI. Mirroring rehabilitation programs developed in England for injured soldiers, training programs were established and over 200 occupational therapy "reconstruction aides" served in the army.<sup>20</sup> During and after the war, teams of occupational therapists, physical therapists, and vocational educators helped injured soldiers return to work (Fig. 2.1).<sup>27</sup> It was during this period that occupational therapy training programs increased requirements for medical knowledge and the ability to work with persons with physical disabilities.

During the period after WWI and before WWII, American occupational therapists worked in a variety of nonmilitary medical settings with people with diagnoses that included tuberculosis, blindness, polio, industrial accident cases, heart disease (often secondary to rheumatic fever), and orthopedic injuries. 30,41 While on bedrest and convalescing, patients would work on handicrafts, such as knitting or basket weaving. These were often described as "diversional" therapy, to direct patients' attention from their illness, prevent depression, and make use of their limited abilities.<sup>51</sup> In the second stage of recovery, patients engaged in occupations to strengthen the body and mind. Examples included knitting, weaving, ceramics, or gardening. Finally, patients engaged in occupations that would prepare them for return to work, such as manual crafts or carpentry, or to a sheltered workshop or agricultural or industrial colonies. 31,66 As occupational therapy treatment became more "scientific," the use of arts and crafts was more commonly prescribed by physicians to increase endurance, coordination, dexterity, muscle power, strength, range of motion, and functional results.<sup>69</sup>

#### The Rehabilitation Model

The rehabilitation model of care gained strength after World War II. A large number of returning soldiers had injuries that required



Fig. 2.1 Occupational therapy basketry and chair caning workshop, U.S. General Hospital #38, Eastview, N.Y. Circa 1919. (Courtesy of the Archive of the American Occupational Therapy Association, Inc.)

#### THREADED CASE STUDY

#### 1920s

The case study of Mary is illustrative of the type of occupational therapy that was being offered during this early era.

Because of her tuberculosis, Mary was admitted to a sanitarium, isolated from her husband, young daughter, parents, and siblings to protect them from the incurable, infectious disease. At first, she was on strict bed rest, although her bed was moved outside when weather permitted so that she would benefit from the fresh air. She looked forward to visits from the occupational therapist, who came to her bedside every other day and brought a basket of activities (knitting, sewing, drawing) from which to choose. These activities helped her pass the long days, did not tax her endurance, and kept her from worrying too much about her future. As she gained strength, she was encouraged to go for short walks in the garden. She visited the occupational therapy room, which offered a range of activities, including weaving and pottery. The occupational therapist helped her choose activities that both were engaging and helped her regain endurance after weeks in bed. As her disease went into remission, she had a period of "conditioning" and then began livelihood training in stenography.<sup>31</sup>

Mary was fortunate. During the late 19th and early 20th century, tuberculosis, or "consumption," was the leading cause of death (1 in 7) in the United States and feared throughout the world (Fig. 2.2). Most patients were advised to rest, eat well, and exercise outdoors, but few recovered and many patients who survived had recurrent bouts of illness that limited activities throughout their lives. The disease affected poor city-dwellers the most because of crowded living conditions and the inability to pay for treatment. Persons with the disease were stigmatized and had to worry about being evicted from their dwellings because of fear of the highly contagious disease.

The discovery of effective medications in the 1940s helped control the spread of tuberculosis and helped patients recover. The United States now has the lowest worldwide rate of tuberculosis in the world (approximately 9000 reported cases in 2019), and approximately 13 million people have latent tuberculosis.\(^{12}\) However, it is estimated that one third of the world's population carries the latent disease,\(^{15}\) and some strains of the disease have become drug resistant. For stories of survivors and people living with the disease today, visit https://www.cdc.gov/tb/topic/basics/personalstories.htm.

care and training to help them return to productive lives. The Veterans Administration hospital system developed departments of physical medicine and rehabilitation to bring together all the services needed to care for the soldiers. As this model proved successful, it was implemented in the private sector for persons with polio, stroke, multiple sclerosis, spinal cord injury, head injury, arthritis, and other chronic conditions. Howard Rusk, MD, a physiatrist and prominent voice in the development of rehabilitation medicine, asserted that trained personnel were needed to

deliver services to the more than 5 million people in the United States who had a chronic disability.<sup>37</sup> He cited occupational therapy as one of the essential rehabilitation services. In response to the growing demand for rehabilitation services, Congress passed the Hill-Burton Act in 1946 to provide federal aid for the construction of rehabilitation centers. A proviso of the legislation was that rehabilitation centers had to include four integrated services: medical (including occupational therapy and physical therapy), psychological, social, and vocational.



**Fig. 2.2** Rensselaer County Tuberculosis Association Poster. (From National Institutes of Health, National Library of Medicine, https://profiles.nlm.nih.gov/101584655X5.)

Close ties with the American Hospital Association and the American Medical Association benefited the profession in its early years; and during and after World War II, the occupational therapy profession was aided by their association with physical medicine and rehabilitation.<sup>37</sup> However, as physiatrists attempted to exert more control over the education and leadership of the profession, occupational therapy leaders resisted these attempts. Leaders recognized that occupational therapists worked in a variety of settings and with many medical specialties, and they did not want to limit the practice settings.<sup>4,81</sup> During this period, therapists began to seek greater autonomy from physician referrals and to focus more on community, rather than hospital-based care.<sup>50</sup>

Although occupational therapy was not subsumed under the physical medicine framework, therapists continued to specialize in particular kinds of medical knowledge and technological skills. Claire Spackman, who along with Helen Willard wrote the most influential textbook on occupational therapy of the time, argued that therapists must become skilled in carrying out new treatments based on improved techniques. According to Spackman, occupational therapists serving people with disability needed to be skilled in teaching activities of daily living, work simplification, and training in the use of upper extremity prostheses. But foremost, she asserted, "Occupational therapy treats the patient by the use of constructive activity in a simulated, normal living and/or working situation."

#### **THREADED CASE STUDY**

#### 1970s

Jacob, a 67-year-old man who recently had a cerebrovascular accident (stoke), was admitted to a 30-bed rehabilitation unit for persons with stroke, spinal cord injury, head injury, and other neurological and orthopedic conditions. It was expected that his stay at the rehabilitation center would last 4 to 5 weeks and he would participate in therapy (physical, occupational, and speech) for a minimum of 3 hours each day. After his initial evaluation, the occupational therapist talked with Jacob about his schedule for the first week. Treatment in the mornings would consist of activities related to hygiene, toileting, dressing, and bathing. Later in the day, they would work on regaining function in his paralyzed right arm. This would consist of neurodevelopmental treatment activities (such as weight-bearing and the use of reflex-inhibiting postures) to decrease tone in the arm. Weak muscles would be facilitated (e.g., tapping, quick stretch) and strengthened by exercises (e.g., stacking cones or sliding his arm on the tabletop) as well as using the hand during functional activities. Jacob made a cutting board that could be used in the kitchen with one hand by hammering two stainless steel nails into a cutting board, and adding suction cup feet. While working in the shop, Jacob observed patients with spinal cord injuries make their own transfer boards by sanding the wood smooth and then applying a finish to the wood. Some of Jacob's therapy sessions were with the occupational therapist; however, a number of the sessions were with the occupational therapy assistant who worked closely with supervision from the occupational therapist.

Before discharge, many patients on the rehabilitation unit would become independent with basic self-care, but in Jacob's case, he still required some assistance for safety when transferring to a toilet, tub, or car and for bathing. His occupational therapist suggested to the rehabilitation team that he be referred for home health occupational therapy, a service that was relatively new in this region of the country. This occupational therapy service would help Jacob work on skills in his home environment, and as he improved, he could transition to outpatient therapy.

Occupational therapists often used their shops to create assistive devices for their patients. Fred Sammons, an occupational therapist who earned his degree using the G.I. Bill benefits after WWII, created a company that sold assistive devices to therapy clinics. In the early days, clinics had to stock items because delivery time could take several weeks. For more about Fred Sammons, visit <a href="https://www.aotf.org/About-AOTF/Staff/fred-sammons.Today">https://www.aotf.org/About-AOTF/Staff/fred-sammons.Today</a>, patients are often directed to the internet to purchase their own equipment, although some custom items are still fabricated by therapists. The advent of three-dimensional printing has created exciting new possibilities for therapists to provide assistive devices, and proponents of universal design have helped make some everyday items more usable by persons with physical limitations. For more information about universal design, see <a href="http://universaldesign.ie/">http://universaldesign.ie/</a> What-is-Universal-Design/.

#### **Expansion and Specialization**

Special education programs were established to train restoration aides during World War I, but occupational therapy leaders in the 1920s recognized the need for stronger educational standards. By 1930, educational programs were required to be 18 months long, with 9 months of classroom and technical work, and 9 months of hospital practice under supervision. By the end of that decade, a college degree was required. At the request of the American Occupational Therapy Association (AOTA; created when NSPOT changed its name in 1921), the American Medical Association was asked to take over inspection of training programs to ensure they met minimum standards. 14,59

In the period before and after World War II, occupational therapists continued to expand their practice in the area of physical disabilities. A shortage of trained occupational therapists during and after World War II led to the development of the aide role, and in 1958 the first certified occupational therapy assistant (COTA) programs were established. Although the first COTA educational programs were established for training assistants to work in mental health settings, programs for training COTAs to work in general practice and nursing home care were developed soon afterward.

As occupational therapy expanded into new practice areas, therapists in rehabilitation and outpatient centers began to focus on restoring self-care skills, creating self-help devices, the use of technology, orthotics, prosthetics, neuromuscular facilitation, therapeutic use of self, prevocational evaluation, and work simplification. <sup>50,72</sup> One paper of the era described the purpose of occupational therapy as the following: to increase endurance; to improve coordination, dexterity, muscle power, strength, and range of motion; to relieve tightness of fascial planes; and to obtain best functional results. <sup>69</sup> The occupational therapy assistant's role in general practice was to help patients develop and maintain skills for daily living and working.

The "typical" practitioner also changed somewhat in the post-World War II era. During the early years of the profession, the profession was exclusively young White women, most often from middle or upper classes and single. There were no males or people of color who were therapists. Concerns related to gender, racial, and cultural diversity began to be discussed during World War II, with AOTA considering whether schools should admit males, Blacks, persons with disabilities, and older (up to age 35) students. 10 Males began to enter the profession in larger numbers in the 1950s and 1960s; however, only 10% of therapists in the present day identify as males. The first two Black therapists, Ruth Denard and Naomi Wright, graduated from occupational therapy school in 1946; only a small number of schools accepted Black applicants at that time.<sup>10</sup> It was not until the 1980s that AOTA began actively studying minority recruitment and retention for the profession.<sup>10</sup> Currently, Whites still represent the largest group (83.7%), followed by Asian/Pacific Islanders (5.8%), Latinx (3.9%), Blacks (3.0%), Multiethnic persons (1.8%), and American Indian/Alaskan Native, (0.3%),1 and efforts to recruit people of color into the profession have been largely unsuccessful. There are many factors at play: many career choices are based on personal relationships, and high school and college students have few role models; lack of preparation in the sciences; poor performance of minority students on standardized tests,83 and institutional racism have limited access to healthcare and healthcare and educational institutions, as well as more basic resources.<sup>34</sup> This lack of diversity within the profession has consequences for patient and client outcomes and professional development. For example, therapists may not fully understand contextual factors that are important to their patients without a broad understanding of culture that can be developed in a rich community of practice.

There was global interest in occupational therapy in the 1920s and beyond. Canadian programs developed in the same period as American clinics and expanded during World War I.<sup>23</sup> England, Germany, Switzerland, and Italy all reportedly

had programs in the 1930s, although the therapy was oriented more toward mental health conditions. 6.22 The World Federation of Occupational Therapists held an organizational meeting in England in 1951, and the association started in 1952 with 10 member associations from the following countries: Australia, Canada, Denmark, India, Israel, New Zealand, South Africa, Sweden, United Kingdom (England and Scotland), and the United States. Today there are 106 regional and individual country member organizations. The organization is the global voice for practice, and supports a "quality of practice that is relevant and sensitive to context and culture." This organization is also committed to occupational justice, advocating actions to counter injustice caused by social problems, poverty, economic restrictions, disease, discrimination, and other causes.

#### Theory-Practice Gap

Traditional arts and crafts treatment approaches were not suited to rehabilitation settings, and by the 1960s, self-care and social skills activities were becoming the norm for treatment (Fig. 2.3).<sup>75</sup> Dr. Frank Krusen, a leader in physical medicine and rehabilitation, stated that "while the average occupational therapist is more concerned with the liberal arts than with the science; nevertheless, the scientific approach is essential to your further advancement." He suggested that therapists focus more on kinetic occupational therapy and better education and research to strengthen the field.<sup>40</sup>

Occupational therapists working in hospitals and rehabilitation centers were under pressure to decrease the length of inpatient hospital stays, demonstrate positive outcomes for their interventions, and increase productivity. The value of arts and crafts was limited under these conditions, and patients themselves often did not understand the purpose or value of arts and crafts. Therapists began to disassociate themselves from the "basket weaver" image and the arts and crafts activities associated with **diversional therapy**, which were not reimbursable by insurance companies and Medicare. <sup>47,58</sup>

Changes in practice set the stage for conflict between occupational therapists who used exercises, neurodevelopmental treatment approaches, and modalities (e.g., biofeedback, electrical stimulation) and practitioners who thought all occupational therapy treatment should be "purposeful." Critics asserted that some occupational therapists were becoming reductionist in their practice, and treating symptoms rather than the person. Scholars such as Gill brought the perspective of the **social model of disability** rights to the discussion about occupational therapy practice. Gill urged occupational therapists to examine their practice and make sure that treatment did not focus solely on the individual's physical condition, but also their needs, values, interests, and the limitations in reaching their goals because of a discrimination and lack of opportunities.

A study by Pendleton supported Gill's concerns. Pendleton found that occupational therapists were much less likely to provide training in independent living skills than physical remediation. She defined independent living skills as "those specific abilities broadly associated with home management and social/community problem solving." Pendleton recommended that if occupational therapists were not able to provide sufficient



Fig. 2.3 Dorothy (Dottie) Wilson, OTR, at Rancho Los Amigos Hospital, circa late 1950s or early 1960s. Rancho Los Amigos Hospital was one of the preeminent rehabilitation centers established on the West Coast in response to the Hill-Burton Act of 1946. Occupational therapists worked with patients with spinal cord injury on activities of daily living, such as eating, dressing, hygiene, and bathing, and underlying motor function such as strengthening, endurance, and coordination. Patients also worked on community living skills. In the next decade, therapists would begin to incorporate more technology, such as environmental control devices (electronic assistive technology that enables persons with disabilities to control functions such as nurse call lights, lighting, heat, telephone) and personal computers, but these devices were primitive and expensive in comparison to today. (Courtesy of the Archive of the American Occupational Therapy Association, Inc.)

independent living skills training in inpatient rehabilitation centers, they should shift their treatment to community-based programs. Pendleton viewed independent living skills as the essence of occupational therapy and urged therapists to make it one of their priorities.<sup>55</sup>

It was during this same period that occupational therapy theorists were critically examining and questioning practice, developing the first occupation-based theories, and exploring the interrelationship of theory with practice. There was a transition from empirical to more scientific approaches, with the process including a "narrowing of the range of empirical content and the broadening of the range of rational theory. Reilly's occupational behavior theory reflected the founders' philosophy that participation in meaningful occupations directly enhanced one's sense of well-being and promoted healthy role functioning.

The *Uniform Terminology*, created by AOTA in 1979, helped occupational therapists conceptualize how occupations, adjunctive therapies, and multiple frameworks and theories might

coexist in practice. The document incorporated performance areas (activities of daily living, work, play, or leisure), and performance components (activities, modalities, techniques). For example, a patient who had a cerebrovascular accident might have a deficit in a performance area (dressing), and the patient's goals and intervention plan might include regaining function, as well as working on underlying strength, tone, or balance issues. The **Occupational Therapy Practice Framework**, which succeeded the *Uniform Terminology* in 2002, further clarified that although occupational therapists use everyday occupations to enhance or enable participation, therapists might also work on underlying motor and process and social skills, as well as body functions.<sup>2</sup>

The theory-practice gap also highlighted the need for more research about occupations, and occupational science was born as an academic discipline. As described by Yerxa,87 the context for the development of occupational science was the increasing number of people with chronic impairments, the public policy debates about the rights of people with disabilities, efforts to show efficacy and cost-effectiveness across health professions, and greater acceptance of qualitative research methods. As an applied science, researchers and practitioners began to be able to translate knowledge about occupation as a guide for practice.86 Scholarship that focuses on the disability experience can add to the profession's body of knowledge, increase our understanding of disability from the individual's perspective, help us develop more effective and meaningful interventions, and to be better advocates for social change. One school of thought that has influenced occupational therapy development in this area is postmodern philosophy, which will be discussed in the next section.

#### **Postmodern Philosophy**

**Postmodern philosophy** is a movement that developed in the 1940s and grew stronger through the late 20th century. It was characterized by subjectivism and a suspicion of reason and meaning. Medical and scientific research and practice were criticized for relying too heavily on technology and science, and ignoring the voices of disabled individuals, minority groups, and others. Postmodern healthcare, it was suggested, should be concerned with values as well as evidence; health as well as healthcare; evaluation of services with respect to appropriateness and necessity; concern with patients' satisfaction and experience of care; commitment of continual quality assurance; and empowerment of patients. Occupation-based theories developed within these broader views of the person (client); their values, motivations, occupations; and their physical and socioeconomic environments.

Postmodern philosophy also influenced the growth of identity politics in the United States, including disability rights activism which resulted in legislative changes in the United States such as the Rehabilitation Act of 1973, the Individuals with Disabilities Education Act of 1973 (IDEA), and the Americans with Disabilities Act of 1990. Despite legislation, however, people with disabilities continued to experience marginalization and financial inequity. 44,66 Although occupational therapists were allies in legislative efforts, disability scholars argued that the implicit assumption underlying rehabilitation and occupational therapy was that disability was undesirable. This reflected a societal perspective

#### THREADED CASE STUDY

#### 2020s

Mara K. is a 26-year-old woman who sustained a T4 ASIA A spinal cord injury 1 year earlier. She is enrolled in a Parenting Self-Management Program that meets online weekly for 4 weeks. There are 10 other parents in the group. Topics include baby care techniques for persons using wheelchairs; parenting toddlers and school age children; safety and emergency planning; talking with children about disability; managing pain, fatigue, and other physical concerns; planning family outings and travel; and community resources. Group sessions are planned and facilitated by the occupational therapist in partnership with a lay leader who is a parent and who has a spinal cord injury. Guest speakers include other parents with disabilities, representatives from community agencies and schools, and others as requested by the group. Participants establish personal goals that they would like to explore during the month-long class. Participants are encouraged to share resources (as with other self-help groups).

This is the first time this center has offered the program. The therapist who developed the group heard about a similar program at a conference, explored the evidence for such a program, gathered input and support from other team members and administrators (including parents, for whom the group was targeted), and determined the best way to implement the program in their setting. The therapist is collecting outcome information related to participant satisfaction, goal attainment, and parental self-efficacy. These data will help determine what changes, if any, might be needed for future classes. One plan for the group is to transition to being led by a parent or parents with a spinal cord injury, with the occupational therapist acting as a resource for the group.

that impairment is a negative state that must be reduced or eliminated. Reduction of a client's disability would lessen social and or economic burden.<sup>39</sup> Disability rights advocates, using the social model of disability, say that people are disabled by physical structures and attitudinal and social barriers, not by their impairment.<sup>26</sup> Kielhofner<sup>39</sup> urged occupational therapists to rethink their concepts and approaches to disabilities, to consider how people experience impairment, how impairments change over time, and how therapists can better understand and support clients and their families.<sup>39</sup> An example of how this postmodern thinking influenced occupational therapy practice can be seen in the following case study circa 2020.

A focus on the therapeutic relationship is one way to ensure that clients' diverse needs are addressed, as was seen in the 2020 Case Study. As reported by Taylor and colleagues, 77 "Most therapists considered therapeutic use of self as the most important skill in occupational therapy practice and a critical element of clinical reasoning. By focusing on the client-therapist relationship, the practitioner is more likely to understand the client's experience as an individual with a disability and thus to work jointly with them to formulate an intervention plan that centers on the client's goals." When an effective therapeutic relationship is formed, practice is much more likely to be client-centered. 76

## USING HISTORY TO UNDERSTAND TODAY'S PRACTICE

During the latter part of the 20th century and into the 21st century, occupational therapists began to consider health as not just as the absence of disease but also risk factors,

including exposure to health threats, genetic factors, and social and economic conditions. They began to work in community settings to promote healthy occupations and habits.<sup>8,35</sup> Baum and Law8 suggested that therapists needed an understanding of community-based organizations (e.g., public health departments, housing services) to be able to work in teams markedly different from "traditional" settings.8 An example of how this might work is the CAPABLE model for functionally impaired communitydwelling older adults.73 This program integrated occupational therapy home visits and treatment with nursing, who addressed pain, depression, polypharmacy, and primary care provider communication. The program also included a handy person for simple repairs and home modifications to promote safety. The CAPABLE program has demonstrated a number of positive outcomes for participants, including increased independence with activities of daily living, improved walking, a reduction in depressive symptoms, and a decrease in home hazards, all while keeping costs relatively low.

A knowledge of history can provide a context from which to understand current challenges to physical disabilities practice. As this history has demonstrated, early treatment in occupational therapy was based on belief in the importance of occupation, habit training, knowledge of crafts, and the application of crafts therapeutically to improve clients' mental and physical condition. As scientific knowledge and technology advanced, occupational therapy defined a role for itself within the rehabilitation model. This closer relationship with medicine helped the profession gain credibility. As medical knowledge increased, specialty areas within occupational therapy began to emerge, such as the areas of spinal cord injury, burn rehabilitation, and hand therapy. However, the scientific reductionism of the medical model placed occupational therapy at odds with occupational therapy's more holistic view of practice, empowerment of clients, the growth of community-based and wellness models of care, the social model of disability, and postmodern analysis of justice and equity in healthcare.

The American Occupational Therapy Association's current definition of occupational therapy, published online, is the following: "Occupational therapy is the only profession that helps people across the lifespan to do the things they want and need to do through the therapeutic use of daily activities (occupations). Occupational therapy practitioners enable people of all ages to live life to its fullest by helping them promote health, and prevent—or live better with—injury, illness, or disability."3 The description of occupational therapy continues: "Occupational therapy practitioners have a holistic perspective, in which the focus is on adapting the environment and/or task to fit the person, and the person is an integral part of the therapy team. It is an evidence-based practice deeply rooted in science."3 Over the decades, the common conditions that occupational therapists might treat have changed (e.g., tuberculosis, polio, head injury, cancer, heart disease, human immunodeficiency virus, COVID-19), the settings have changed (e.g., hospital, long-term care, home, hospice, wellness centers, community centers), and other contextual factors have evolved. However, occupational therapists continue to view clients and their roles through a humanistic, holistic lens that defines its goals by what is important to the client.

#### **REVIEW QUESTIONS**

- 1. What were the primary contributions of moral treatment, the arts and crafts movement, and pragmatist philosophy to the early practice of occupational therapy? Are these same contributions part of practice today?
- **2.** Explain why you think the early founders of OT emphasized the need for research.
- **3.** Discuss the pros and cons of occupational therapy's alliance with physicians' organizations and the medical model.
- **4.** Occupational therapists were divided about the use of modalities and treatments that were not "occupation-based." How was this issue resolved by the professional community?
- **5.** Analyze how the social model of disability influenced occupational therapy practice.
- **6.** Occupational therapy practitioners are described as having a "holistic perspective." Describe what that means to you.
- **7.** Consider ways in which increasing globalization will affect the future practice of occupational therapy.

For additional practice questions for this chapter, please visit eBooks. Health. Elsevier.com.

#### **REFERENCES**

- 1. American Occupational Therapy Association: 2019 Workforce and salary survey. Bethesda, MD, 2020a, American Occupational Therapy Association.
- 2. American Occupational Therapy Association: Occupational therapy practice framework: domain and process, 4th ed, *Am J Occup Ther* 74(Suppl 2):1–87, 2020b.
- 3. American Occupational Therapy Association: *What is occupational therapy?* 2021. https://www.aota.org/Conference-Events/OTMonth/what-is-OT.aspx.
- 4. Anderson LT, Reed KL: *The history of occupational therapy: the first century*, Thorofare, NJ, 2017, SLACK, Inc.
- 5. Anthony SH: Dr. Herbert J. Hall: Originator of honest work for occupational therapy 1904–1923 (Part 1), *Occup Ther Health Care* 19(3):3–19, 2005.
- 6. Armstrong-Jones R: Occupational therapy, Br Med J 2(3844):486, 1934.
- 7. Barton GE: *The movies and the microscope*, Bethesda, MD, American Occupation Therapy Foundation, Wilma West Library,1920.
- 8. Baum C, Law M: Community health: a responsibility, an opportunity, and a fit for occupational therapy, *Am J Occup Ther* 52(1):7–10, 1998.
- 9. Bing RK: Occupational therapy revisited: A paraphrastic journey, *Am J Occup Ther* 35(8):498–518, 1981.
- 10. Black RM: Occupational therapy's dance with diversity, *Am J Occup Ther* 56(2):140–148, 2002.
- 11. Breines E: The issue is: an attempt to define purposeful activity, *Am J Occup Ther* 38(8):543–544, 1984.
- 12. Centers for Disease Control and Prevention. Tuberculosis data and statistics. https://www.cdc.gov/tb/statistics/default.htm.
- 13. Cole MB, Tufano R: *Applied theories in occupational therapy*, Thorofare, NJ, 2020, SLACK Incorporated.
- 14. Colman W: Structuring education: development of the first educational standards in occupational therapy, 1917–1930, *Am J Occup Ther* 46(7):653–660, 1992.
- 15. Constitution of the National Society for the Promotion of Occupational Therapy (1917). Baltimore, MD, Sheppard Pratt Hospital Press.
- 16. Cottrell RPF: COTA education and professional development: a historical review, *Am J Occup Ther* 54(4):407–412, 2000.
- 17. Dunn W, McGourty L: Application of uniform terminology to practice, *Am J Occup Ther* 43(12):817–831, 1989.
- 18. Dunton WR: *Prescribing occupational therapy*, Springfield, IL, 1928, Charles C. Thomas.
- 19. Dunton WR: The three "R's" of occupational therapy, *Occup Ther Rehabilitation* 7:345–348, 1928.
- 20. Dunton WR: History and development of occupational therapy. In Willard H, Spackman C, editors: *Principles of occupational therapy*, Philadelphia, 1947, J. B. Lippincott Company, pp 1–9.

- 21. English C, Kasch M, Silverman P, Walker S: On the role of the occupational therapist in physical disabilities, *Am J Occup Ther* 36(3):200–202, 1982.
- 22. Franks RM: Occupational therapy in Europe, *Can J Occup Ther*, 1933. https://doi.org/10.1177/000841743300100104.
- Friedland J: Restoring the spirit: the beginnings of occupational therapy in Canada, 1980–1930, Montreal, Canada, 2011, McGill-Queen's University Press.
- Gergen KJ: Toward a postmodern psychology. In Kvale S, editor: Psychology and postmodernism, Newbury Park, CA, 1992, SAGE Publications, pp 17–28.
- 25. Gill C: A new social perspective on disability and its implications for rehabilitation, *Occup Ther Health Care* 4:49–55, 1987.
- Goering S: Rethinking disability: the social model of disability and chronic disease, Curr Rev Musculoskelet Med 8(2):134–138, 2015.
- 27. Gutman SA: Influence of the U.S. military and occupational therapy reconstruction aides in World War I on the development of occupational therapy, *Am J Occup Ther* 49(3):256–262, 1995.
- 28. Hall HJ: Remunerative occupations for the handicapped, *Mod Hospital* 8(6):383–386, 1917.
- Hansan, J.E. (2011). Settlement houses: An introduction. VCU Libraries Social Welfare History Project. https://socialwelfare. library.vcu.edu/settlement-houses/settlement-houses/.
- 30. Harmon M: The history of the New Jersey Occupational Therapy Association, *Occup Ther Rehabilitation* 17(1):49–54, 1938.
- 31. Heaton TG: Occupational therapy for the tuberculous: Motives and methods, *Can J Occup Ther* 4:54–61, 1937.
- 32. Hickman LA: John Dewey: his life and work. In Hickman LA, Neubert S, Reich K, editors: *John Dewey between pragmatism and constructivism*, New York, 2009, Fordham University Press.
- 33. Ikiugu MN, Nissen RM: Pragmatic foundations: instrumentalism and transactionalism in occupational therapy. In Taff SD, editor: *Philosophy and occupational therapy: informing education, research, and practice,* Thorofare, NJ, 2021, SLACK Incorporated.
- 34. Institute of Medicine: *Unequal treatment: confronting racial and ethnic disparities in healthcare*, Washington, DC, 2009, National Academies Press.
- 35. Johnson JA: Wellness: its myths, realities, and potential for occupational therapy, *Occup Ther Health Care* 2(2):117–138, 1985.
- 36. Johnson SC: Instruction in handcrafts and design for hospital patients, *Mod Hospital* 15(1):69–72, 1920.
- Kevorkian CG, Bartels M, Franklin DJ: To believe in humanity and in rehabilitation: Howard A. Rusk, MD, and the birth of rehabilitation medicine, *Phys Med Rehabilitation* 5:247–254, 2013.
- 38. Kidner TB: Planning for occupational therapy, *Mod Hospital* 21:414–428, 1923.
- 39. Kielhofner G: Rethinking disability and what to do about it: disability studies and its implications for occupational therapy, *Am J Occup Ther* 59:487–496, 2005.

- 40. Krusen FH: Relationships between occupational therapy and physical medicine and rehabilitation, *Can J Occup Ther* 21(1):3–9, 1954.
- 41. LeVesconte HP: Expanding fields of occupational therapy, *Can J Occup Ther* 3:4–12, 1935.
- 42. Levine RE: The influence of the arts-and-crafts movement on the professional status of occupational therapy, *Am J Occup Ther* 41(4):248–254, 1987.
- 43. Llorens LA, Gillette NP: The challenge for research in a practice profession, *Am J Occup Ther* 39(3):143–145, 1985.
- 44. Longmore P: Why I burned my book and other essays on disability, Philadelphia, 2003, Temple University Press.
- 45. Luchins AS: Moral treatment in asylums and general hospitals in 19<sup>th</sup>-century America, *J Psychol* 123(6):585–607, 1989.
- 46. Mahoney WJ, Kiraly-Alvarez AF: Challenging the status quo: infusing non-Western ideas into occupational therapy education and practice, *Open J Occup Ther* 7(3):1–10, 2019. https://doi.org/10.15453/2168-6408.1592.
- 47. Mead S, Harell A: Failures in functional occupational therapy, *Arch Phys Med rehabilitation* 31(12):753–756, 1950.
- 48. Meyer A: The philosophy of occupational therapy, *Arch Occup Ther* 1(1):1–10, 1922.
- 49. Morrison R: Pragmatist epistemology and Jane Addams: Fundamental concepts for the social paradigm of occupational therapy, *Occup Ther Int* 23:295–304, 2016.
- 50. Mosey AC: Involvement in the rehabilitation movement 1942–1960, *Am J Occup Ther* 25(5):234–236, 1971.
- 51. Osthoff H: Occupational therapy and poliomyelitis, *Can J Occup Ther* 17(4):151–153, 1939.
- 52. Peloquin SM: Moral treatment: contexts considered, *Am J Occup Ther* 43(8):537–544, 1989.
- 53. Peloquin SM: Occupational therapy service: individual and collective understandings of the founders, Part 1, *Am J Occup Ther* 45(4):352–360, 1991.
- 54. Peloquin SM: Occupational therapy service: Individual and collective understandings of the founders, Part 2, *Am J Occup Ther* 45(8):733–744, 1991.
- 55. Pendleton HM: Occupational therapists current use of independent living skills training for adult inpatients who are physically disabled, *Occup Ther Health Care* 6:93–108, 1990.
- 56. Quiroga VAM: *Occupational therapy: the first 30 years*, Bethesda, MD, 1995, American Occupational Therapy Association.
- 57. Ransom JE: The beginnings of hospitals in the United State, *Bull History Med* 13(5):514–539, 1943.
- 58. Reed KL: Tools of practice: heritage or baggage? *Am J Occup Ther* 40:597–605, 1986.
- Reed KL: Identification of the people and critique of the ideas in Meyer's philosophy of occupational therapy, *Occup Ther Ment Health* 33(2):107–128, 2017. https://doi.org/10.1080/016421 2X.2017.1280445.
- 60. Reed KL: The pioneer schools of occupation: reflections for current practice, *Occup Ther Health Care* 32(3):251–274, 2018. https://doi.org/10.1080/07380577.2018.1493760.
- 61. Reed KL: Henry B. Favill and the School of Occupations: origins of occupational therapy practice and education, *Occup Ther Health Care* 33(2):159–180, 2019. https://doi.org/10.1080/07380577.2018.1553087.
- 62. Reilly M: An occupational therapy curriculum for 1965, *Am J Occup Ther* 12(6):293–299, 1958.
- 63. Risse GB: *Mending bodies, saving souls: a history of hospitals,* Oxford, UK, 1999, Oxford University Press.

- 64. Schemm RL: Bridging conflicting ideologies: the origins of American and British occupational therapy, *Am J Occup Ther* 48(11):1082–1088, 1994.
- 65. Schwartz KB: Reclaiming our heritage: connecting the founding vision to the centennial vision, *Am J Occup Ther* 63:681–690, 2009. https://doi.org/10.5014/ajot.63.6.681.
- 66. Schwartz KB: History and practice trends in physical dysfunction intervention. In Pendleton HM, Schultz-Krohn W, editors: *Pedretti's Occupational Therapy*, St Louis, 2018, Elsevier, pp 16–23.
- 67. Schweik SM: *The ugly laws: disability in public*, New York, NY, 2009, New York University Press.
- 68. Shannon PD: The derailment of occupational therapy, *Am J Occup Ther* 31(4):229–234, 1977.
- 69. Shields CD, Oelhafen WR, Sheehan HR: The role of occupational therapy in the physical medicine management of physical disabilities, *South Med J* 45(5):395–400, 1952.
- 70. Slagle EC: Training aides for mental patients, *Arch Occup Ther* 1(1):11–18, 1922.
- 71. Spackman CS: A history of the practice of occupational therapy for restoration of physical function: 1917–1967, *Am J Occup Ther* 22:67–71, 1968.
- 72. Strickland LR: Directions for the future—occupational therapy practice then and now, 1949–the present, *Am J Occup Ther* 45(2): 105–107, 1991.
- 73. Szanton SL, Gitlin LN: Meeting the health care financing imperative through focusing on function: the CAPABLE studies, *Public Policy Aging* 26(3):106–110, 2016. https://doi.org/10.1093/ppar/prw014.
- 74. Taylor F: *The principles of scientific management*, New York, 1911, Harper.
- 75. Taylor E, Manguno J: Use of treatment activities in occupational therapy, *Am J Occup Ther* 45(4):317–322, 1991.
- 76. Taylor R, Lee SW, Kielhofner G, Ketkar M: Therapeutic use of self: a nationwide survey of practitioners' attitudes and experiences, *Am J Occup Ther* 63:198–207, 2009.
- 77. Thayer HS: *Meaning and action: a critical history of pragmatism*. Indianapolis, IN, 1981, Hackett Publishing Company.
- 79. Tracy SE: Studies in invalid occupation: a manual for nurses and attendants, Boston, MA, 1910, Whitcomb and Barrows.
- 80. Triggs, OL: Chapters in the history of the arts and crafts movement. Bohemia Guild of the Industrial Arts League, 1902. https://archive.org/stream/chaptersinhistor00trigrich?ref=ol.
- 81. West WL: Ten milestone issues in AOTA history, *Am J Occup Ther* 46(12):1066–1074, 1992.
- 82. Wiebe R: *The search for order, 1877–1920*, New York, 1967, Hill and Wang, A division of Farrar, Strauss and Giroux..
- 83. Wilbur, KL: (2016). Race matters: occupational therapy as a career choice by high school students of color. Tacoma, WA, University of Washington, 2016. https://digitalcommons.tacoma.uw.edu.
- 84. World Federation of Occupational Therapists. Practice development. 2021. https://www.wfot.org/programmes/practice.
- 85. World Health Organization (WHO). *Global tuberculosis report*, 2022. https://www.who.int/teams/global-tuberculosis-programme/tb-reports/global-tuberculosis-report-2022.
- 86. Wright-St. Claire VA, Hocking C: Occupational science. In Boyt Schell BA, Gillen G, editors: *Willard and Spackman's Occupational therapy*, Philadelphia, 2019, Wolters Kluwer, pp 123–139.
- 87. Yerxa EJ: Occupational science: a renaissance of service to humankind through knowledge, *Occup Ther Int* 7(2):87–98, 2000.