Disaster Medical Response Programs

NOW RECRUITING MEDICAL AND NON-MEDICAL PROFESSIONALS TO SUPPORT MEDICAL SERVICES DURING DISASTERS AND THE PANDEMIC

Emergency Medical Services Authority

Disaster Medical Services Division

CA EMSA Disaster Medical Response Programs:

To see program descriptions select from the links below:

- California Health Corps (CAHC)
- California Medical Assistance Team (CALMAT)

EMSA is accepting applications for the CAHC and CAL-MAT Programs.

(Individuals with specific medical licenses may apply to both Programs)

Registration and Application Information

Program Descriptions:

California Health Corps (CAHC) Program

The CAHC program is the state's response to an increased need for licensed medical professionals within healthcare facilities experiencing a medical surge due to a disaster such as the COVID-19 pandemic. CAHC temporarily deploys licensed and trained medical personnel to healthcare facilities per their request to provide patient care. Members will typically deploy for 7 to 14 days and work up to 12 hours on an AM or PM shift during 24-hour operations depending on the facility's needs. A CAHC member becomes a paid temporary emergency hire (E-hire) state employee while activated to support disasters statewide in California.

CAHC E-Hire positions you can apply for and links to duty statements:

Medical Positions:

- Certified Nursing Assistant (pdf)
- Emergency Medical Technician (pdf)
- Licensed Vocational Nurse (pdf)
- Nurse Practitioner (pdf)
- Physician Assistant (pdf)
- Physician and Surgeon (pdf)
- Registered Nurse (pdf)
- Respiratory Care Practitioner (pdf)

California Medical Assistance Team (CAL-MAT) Program

CAL-MAT medical professionals provide medical services and non-medical professionals provide mission support services during disasters in California to close the gap between local and federal responses during major disaster medical events. CAL-MATs are modeled after the successful federal DMAT program, CAL-MATs are a group of trained medical and non-medical professionals organized, coordinated, and deployed by the State EMSA for rapid field medical response during disasters to support fire base camps, shelters, alternate care sites, mission support sites, and so much more. Members will typically deploy for 14 days and work up to 12 hours on an AM or PM shift during 24 operations. CAL-MAT members become paid temporary emergency hire (E-hire) state employees while activated to support disasters statewide in California. Medical and non – medical professionals statewide can join this program to ensure the constituents of California receive crucial patient care during disasters.

CAL-MAT E-Hire positions you can apply for and links to duty statements:

For more information, please email disastermedicalresponseprograms@emsa.ca.gov

PROGRAM INFORMATION

- CAHC Resources & FAQS
- CAHC Position and Classifications (pdf)
- CAHC Position Duty Statements
- CAHC Pay Scale (pdf)
- CAHC Policies and Procedures
- Field Guides

Medical Positions:

- Behavior Health Specialist II (pdf)
- Certified Nursing Assistant (pdf)
- Chief Medical Officer (Psychology) (pdf)
- Emergency Medical Technician (pdf)
- Licensed Vocational Nurse (pdf)
- Nurse Practitioner (pdf)
- Paramedic (pdf)
- Pharmacist – I (pdf)
- Physical Therapist (pdf)
- Physician Assistant (pdf)
- Physician and Surgeon (pdf)
- Psychologist (pdf)
- Registered Nurse (pdf)
- Respiratory Care Practitioner (pdf)

Non-Medical Positions:

- Staff Services Analyst (pdf)
- Assistant Telecommunications Engineer (pdf)
- Associate Government Program Analyst (pdf)
- Health and Safety Officer (pdf)
- Office Technician General (pdf)
- Warehouse Worker (pdf)

For more information, please email disastermedicalresponseprograms@emsa.ca.gov

PROGRAM INFORMATION

- CAL-MAT Pay Scale (pdf)
- CAL-MAT Position Duty Statements
- CAL-MAT Program Brochure (pdf)
- CAL-MAT FAQ (pdf)
- Unit Administrative and Training Specialist and Medical Officer Positions (pdf)
- GO-BAG Recommendations (pdf)
- CAL-MAT Policies and Procedures
- Field Guides
- EMSA Pocket Travel Guide
- CAL-MAT Fire Camp Manuel

Updated: March 01, 2023

STATE OF CALIFORNIA - DEPARTMENT OF GENERAL SERVICES

DUTY STATEMENT

DGS OHR 907 (Rev. 09/2018)

☐ Current
☐ Proposed

RPA NUMBER	DGS OFFICE or CLIENT AGENCY Emergency Medical Services Authority	
UNIT NAME Disaster Medical Services	REPORTING LOCATION	
SCHEDULE (DAYS / HOURS)	POSITION NUMBER 312-740-8280-906	CBID R19
CLASS TITLE Physical Therapist	WORKING TITLE Physical Therapist	
PROPOSED INCUMBENT (IF KNOWN)	EFFECTIVE DATE	

CORE VALUES / MISSION ☐ Rank and File ☐ Supervisor ☐ Specialist ☐ Office of Administrative Hearings ☑ Client Agency

The mission of EMSA is to prevent injuries, reduce suffering, and save lives by developing standards for and administering an effective statewide coordinated system of quality emergency medical care and disaster medical response that integrates public health, public safety, and healthcare.

POSITION CONCEPT

Under direction of the Chief Medical Officer, the Physical Therapist is a member of an assigned California Medical Assistance Team (CAL-MAT). The Physical Therapist provides patient care to those who are seriously injured due to a disaster or major emergency.

SPECIAL REQUIREMENTS ☐ Conflict of Interest ☐ Medical Evaluation ☐ Background Evaluation ☐ Background Evaluation FTB ☐ Office Technician (Typing)

ESSENTIAL FUNCTIONS

PERCENTAGE	DESCRIPTION
40%	• Evaluates and instructs patients in activities of daily living. • Instructs mobility-impaired patients on therapies to improve functional abilities. • Evaluates need for durable medical equipment and assisted devices to improve patient's ability to function. • If patient has a prosthetic or wheelchair, evaluates need for modification. • Assists in scheduling discharge planning and need for on-going therapy. • Establishes and advances "home" exercise programs, as needed, to facilitate independence with activities of daily living and mobility.
40%	• Initiates formal assessments of patients and prepares appropriate treatment plans. • Conducts patient evaluations and documents all comments in the patient's medical file. • Administers physical treatments which may include joint mobilization, muscle training and corrective exercises, and coordination therapy to patients as assigned. • Observes the physical condition of the patient and reaction to therapy and reports unusual occurrences to team physician/lead. • Makes appropriate and timely entries in medical records to document clinical progress. • Carries out instructions of the physician in charge.
15%	• Makes recommendations to treatment and management team on a patient's need for medical equipment.

PERCENTAGE	DESCRIPTION
	• Attends meetings and participates in training and education classes as needed. • Assists in training members of the medical team on safely assisting patients to promote both patient and staff safety. • Makes recommendations regarding site set up or patient accommodation within the facility to enhance safety.

MARGINAL FUNCTIONS

PERCENTAGE	DESCRIPTION
5%	• Perform related medical functions as necessary to fulfill the Team mission, goals and objectives.

WORK ENVIRONMENT AND PHYSICAL REQUIREMENTS

Shall be required to work in the field, with a Mission Support Team, or location to provide assistance in emergency response and recovery activities.
Ability to accept a 14 consecutive day deployment with the potential to decrease or extend (This means all personal appointments should be cleared before accepting this assignment).
Ability to work irregular work hours (7 days a week, 12 hour shifts)
Ability to function in austere living conditions such as base camp style (or similar) housing/lodging.
Ability to self-sustain for first 24 to 72 hours.
Ability to effectively handle stress, multiple tasks and tight deadlines calmly and efficiently.
Ability to communicate confidently and courteously with people of different backgrounds, different ethnic origins, and different personality types; with the general public, private sector professionals and people of various level of responsibility within state, local and the federal government.
Ability to consistently exercise good judgment and effective communication skills.

PHYSICAL ABILITY

Persons appointed to this position must be reasonably expected to have and maintain sufficient strength, agility and endurance to perform during stressful (physical, mental, and emotional) situations as may be encountered during deployments without compromising their health and well-being, or that of their fellow team members or patients.

☐ Current
☐ Proposed

You are a valued member of the department's team. You are expected to work cooperatively with team members and others to enable the department to provide the highest level of service possible. Your creativity and productivity are encouraged. Your efforts to treat others fairly, honestly and with respect are important to everyone who works with you.

I have discussed with my supervisor and understand the duties of the position and have received a copy of the duty statement.

EMPLOYEE NAME	EMPLOYEE SIGNATURE	DATE SIGNED

I have discussed the duties of the position with the employee and certify the duty statement is an accurate description of the essential functions of the position.

SUPERVISOR NAME	SUPERVISOR SIGNATURE	DATE SIGNED

Occupational Therapy Practice Framework: Domain and Process Fourth Edition

Contents

Preface

The fourth edition of the *Occupational Therapy Practice Framework: Domain and Process* (hereinafter referred to as the *OTPF–4*), is an official document of the American Occupational Therapy Association (AOTA). Intended for occupational therapy practitioners and students, other health care professionals, educators, researchers, payers, policymakers, and consumers, the *OTPF–4* presents a summary of interrelated constructs that describe occupational therapy practice.

Definitions

Within the *OTPF–4, occupational therapy* is defined as the therapeutic use of everyday life occupations with persons, groups, or populations (i.e., the client) for the purpose of enhancing or enabling participation. Occupational therapy practitioners use their knowledge of the transactional relationship among the client, the client's engagement in valuable occupations, and the context to design occupation-based intervention plans. Occupational therapy services are provided for habilitation, rehabilitation, and promotion of health and wellness for clients with disability- and non–disability-related needs. These services include acquisition and preservation of occupational identity for clients who have or are at risk for developing an illness, injury, disease, disorder, condition, impairment, disability, activity limitation, or participation restriction (AOTA, 2011; see the glossary in Appendix A for additional definitions).

When the term *occupational therapy practitioners* is used in this document, it refers to both occupational therapists and occupational therapy assistants (AOTA, 2015b). Occupational therapists are responsible for all aspects of occupational therapy service delivery and are accountable for the safety and effectiveness of the occupational therapy service delivery process.

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Occupational therapy assistants deliver occupational therapy services under the supervision of and in partnership with an occupational therapist (AOTA, 2020a).

The clients of occupational therapy are typically classified as *persons* (including those involved in care of a client), *groups* (collections of individuals having shared characteristics or a common or shared purpose; e.g., family members, workers, students, people with similar interests or occupational challenges), and *populations* (aggregates of people with common attributes such as contexts, characteristics, or concerns, including health risks; Scaffa & Reitz, 2014). People may also consider themselves as part of a *community,* such as the Deaf community or the disability community; a *community* is a collection of populations that is changeable and diverse and includes various people, groups, networks, and organizations (Scaffa, 2019; World Federation of Occupational Therapists [WFOT], 2019). It is important to consider the community or communities with which a client identifies throughout the occupational therapy process.

Whether the client is a person, group, or population, information about the client's wants, needs, strengths, contexts, limitations, and occupational risks is gathered, synthesized, and framed from an occupational perspective. Throughout the *OTPF–4,* the term *client* is used broadly to refer to persons, groups, and populations unless otherwise specified. In the *OTPF–4*, "group" as a client is distinct from "group" as an intervention approach. For examples of clients, see Table 1 (all tables are placed together at the end of this document). The glossary in Appendix A provides definitions of other terms used in this document.

Evolution of This Document

The *Occupational Therapy Practice Framework* was originally developed to articulate occupational therapy's distinct perspective and contribution to promoting the health and participation of persons, groups, and populations through engagement in occupation. The first edition of the *OTPF* emerged from an examination of documents related to the *Occupational Therapy Product Output Reporting System and Uniform Terminology for Reporting Occupational Therapy Services* (AOTA, 1979). Originally a document that responded to a federal requirement to develop a uniform reporting system, this text gradually shifted to describing and outlining the domains of concern of occupational therapy.

The second edition of *Uniform Terminology for Occupational Therapy* (AOTA, 1989) was adopted by the AOTA Representative Assembly (RA) and published in 1989. The document focused on delineating and defining only the occupational performance areas and occupational performance components that are addressed in occupational therapy direct services. The third and final edition of *Uniform Terminology for Occupational Therapy* (*UT–III;* AOTA, 1994) was adopted by the RA in 1994 and was "expanded to reflect current practice and to incorporate contextual aspects of performance" (p. 1047). Each revision

reflected changes in practice and provided consistent terminology for use by the profession.

In fall 1998, the AOTA Commission on Practice (COP) embarked on the journey that culminated in the *Occupational Therapy Practice Framework: Domain and Process* (AOTA, 2002a). At that time, AOTA also published *The Guide to Occupational Therapy Practice* (Moyers, 1999), which outlined contemporary practice for the profession. Using this document and the feedback received during the review process for the *UT–III,* the COP proceeded to develop a document that more fully articulated occupational therapy.

The *OTPF* is an ever-evolving document. As an official AOTA document, it is reviewed on a 5-year cycle for usefulness and the potential need for further refinements or changes. During the review period, the COP collects feedback from AOTA members, scholars, authors, practitioners, AOTA volunteer leadership and staff, and other stakeholders. The revision process ensures that the *OTPF* maintains its integrity while responding to internal and external influences that should be reflected in emerging concepts and advances in occupational therapy.

The *OTPF* was first revised and approved by the RA in 2008. Changes to the document included refinement of the writing and the addition of emerging concepts and changes in occupational therapy. The rationale for specific changes can be found in Table 11 of the *OTPF–2* (AOTA, 2008, pp. 665–667).

In 2012, the process of review and revision of the *OTPF* was initiated again, and several changes were made. The rationale for specific changes can be found on page S2 of the *OTPF–3* (AOTA, 2014).

In 2018, the process to revise the *OTPF* began again. After member review and feedback, several modifications were made and are reflected in this document:

- The focus on group and population clients is increased, and examples are provided for both.
- Cornerstones of occupational therapy practice are identified and described as foundational to the success of occupational therapy practitioners.
- *Occupational science* is more explicitly described and defined.
- The terms *occupation* and *activity* are more clearly defined.
- For occupations, the definition of *sexual activity* as an activity of daily living is revised, *health management* is added as a general occupation category, and *intimate partner* is added in the social participation category (see Table 2).
- The *contexts and environments* aspect of the occupational therapy domain is changed to *context* on the basis of the World Health Organization (WHO; 2008) taxonomy from the *International Classification of Functioning, Disability and Health (ICF)* in an effort to adopt standard, well-accepted definitions (see Table 4).
- For the client factors category of body functions, *gender identity* is now included under "experience of self and time," the definition of *psychosocial* is expanded to match the *ICF* description, and *interoception* is added under sensory functions.
- For types of intervention, "preparatory methods and tasks" has been changed to "interventions to support occupations" (see Table 12).
- For outcomes, transitions and discontinuation are discussed as conclusions to occupational therapy services, and patient-reported outcomes are addressed (see Table 14).
- Five new tables are added to expand on and clarify concepts:
  - Table 1. Examples of Clients: Persons, Groups, and Populations
  - Table 3. Examples of Occupations for Persons, Groups, and Populations
  - Table 7. Performance Skills for Persons (includes examples of effective and ineffective performance skills)
  - Table 8. Performance Skills for Groups (includes examples of the impact of ineffective individual performance skills on group collective outcome)
  - Table 10. Occupational Therapy Process for Persons, Groups, and Populations.
- Throughout, the use of *OTPF* rather than *Framework* acknowledges the current requirements for a unique

identifier to maximize digital discoverability and to promote brevity in social media communications. It also reflects the longstanding use of the acronym in academic teaching and clinical practice.

- Figure 1 has been revised to provide a simplified visual depiction of the domain and process of occupational therapy.

Vision for This Work

Although this edition of the *OTPF* represents the latest in the profession's efforts to clearly articulate the occupational therapy domain and process, it builds on a set of values that the profession has held since its founding in 1917. The original vision had at its center a profound belief in the value of therapeutic occupations as a way to remediate illness and maintain health (Slagle, 1924). The founders emphasized the importance of establishing a therapeutic relationship with each client and designing a treatment plan based on knowledge about the client's environment, values, goals, and desires (Meyer, 1922). They advocated for scientific practice based on systematic observation and treatment (Dunton, 1934). Paraphrased using today's lexicon, the founders proposed a vision that was occupation based, client centered, contextual, and evidence based—the vision articulated in the *OTPF–4*.

Introduction

The purpose of a framework is to provide a structure or base on which to build a system or a concept ("Framework," 2020). The *OTPF* describes the central concepts that ground occupational therapy practice and builds a common understanding of the basic tenets and vision of the profession. The *OTPF–4* does not serve as a taxonomy, theory, or model of occupational therapy. By design, the *OTPF–4* must be used to guide occupational therapy practice in conjunction with the knowledge and evidence relevant to occupation and occupational therapy within the identified areas of practice and with the appropriate clients. In addition, the *OTPF–4* is intended to be a valuable tool in the academic preparation of students, communication with the public and policymakers, and provision of language that can shape and be shaped by research.

Occupation and Occupational Science

Embedded in this document is the occupational therapy profession's core belief in the positive relationship between occupation and health and its view of people as occupational beings. Occupational therapy practice emphasizes the occupational nature of humans and the importance of occupational identity (Unruh, 2004) to healthful, productive, and satisfying living. As Hooper and Wood (2019) stated,

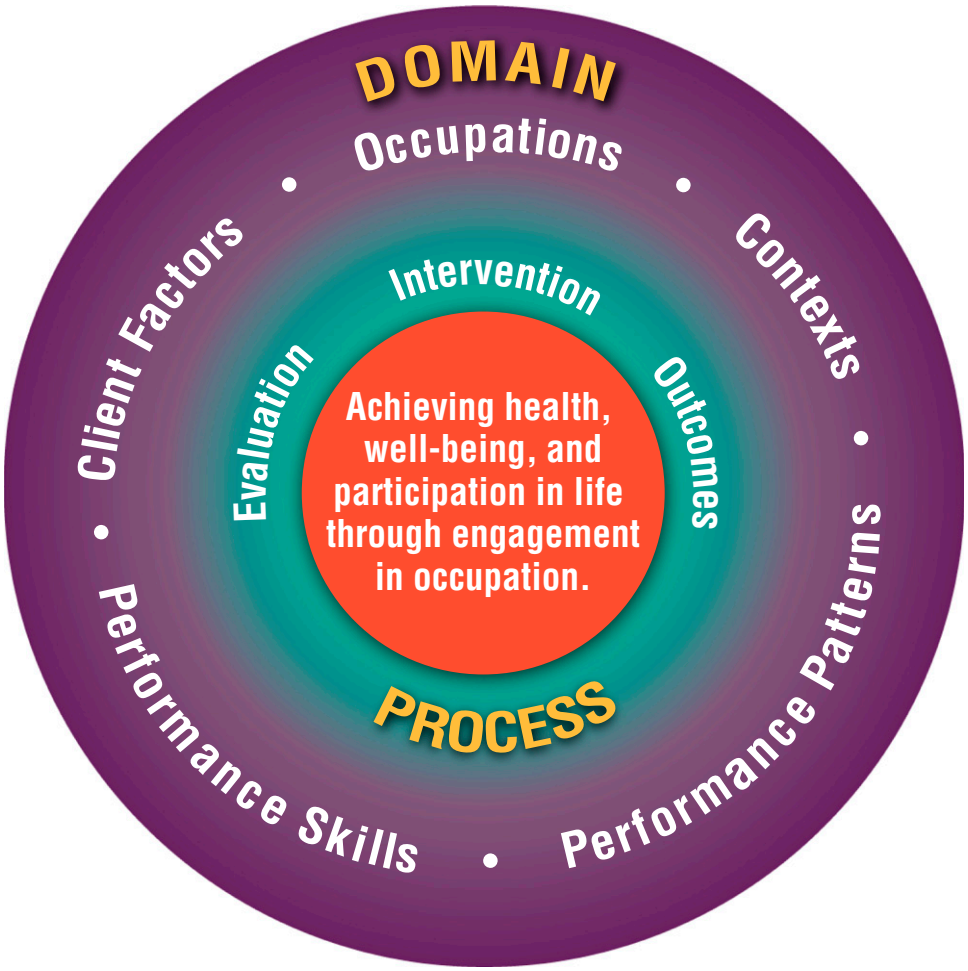
> A core philosophical assumption of the profession, therefore, is that by virtue of our biological endowment, people of all ages and abilities require occupation to grow and thrive; in pursuing occupation, humans express the totality of their being, a mind–body–spirit union. Because human existence could not otherwise be, humankind is, in essence, occupational by nature. (p. 46)

Occupational science is important to the practice of occupational therapy and "provides a way of thinking that enables an understanding of occupation, the occupational nature of humans, the relationship between occupation, health and well-being, and the influences that shape occupation" (WFOT, 2012b, p. 2). Many of its concepts are emphasized throughout the *OTPF–4,* including occupational justice and injustice, identity, time use, satisfaction, engagement, and performance.

OTPF *Organization*

The *OTPF–4* is divided into two major sections: (1) the *domain,* which outlines the profession's purview and the areas in which its members have an established body of knowledge and expertise, and (2) the *process,* which describes the actions practitioners take when providing services that are client centered and focused on engagement in occupations. The profession's understanding of the domain and process of occupational therapy guides practitioners as they seek to support clients' participation in daily living, which results from the dynamic intersection of clients, their desired engagements, and their contexts (including environmental and personal factors;

Figure 1. Occupational Therapy Domain and Process



Christiansen & Baum, 1997; Christiansen et al., 2005; Law et al., 2005).

"Achieving health, well-being, and participation in life through engagement in occupation" is the overarching statement that describes the domain and process of occupational therapy in its fullest sense. This statement acknowledges the profession's belief that active engagement in occupation promotes, facilitates, supports, and maintains health and participation. These interrelated concepts include

- *Health*—"a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity" (WHO, 2006, p. 1).
- *Well-being*—"a general term encompassing the total universe of human life domains, including physical, mental, and social aspects, that make up what can be called a 'good life'" (WHO, 2006, p. 211).
- *Participation*—"involvement in a life situation" (WHO, 2008, p. 10). Participation occurs naturally when clients are actively involved in carrying out occupations or daily life activities they find purposeful and meaningful. More specific outcomes of occupational therapy intervention are multidimensional and support the end result of participation.
- *Engagement in occupation*—performance of occupations as the result of choice, motivation, and meaning within a supportive context (including

environmental and personal factors). Engagement includes objective and subjective aspects of clients' experiences and involves the transactional interaction of the mind, body, and spirit. Occupational therapy intervention focuses on creating or facilitating opportunities to engage in occupations that lead to participation in desired life situations (AOTA, 2008).

Although the domain and process are described separately, in actuality they are linked inextricably in a transactional relationship. The aspects that constitute the domain and those that constitute the process exist in constant interaction with one another during the delivery of occupational therapy services. Figure 1 represents aspects of the domain and process and the overarching goal of the profession as achieving health, well-being, and participation in life through engagement in occupation. Although the figure illustrates these two elements in distinct spaces, in reality the domain and process interact in complex and dynamic ways as described throughout this document. The nature of the interactions is impossible to capture in a static one-dimensional image.

Cornerstones of Occupational Therapy Practice

The transactional relationship between the domain and process is facilitated by the occupational therapy practitioner. Occupational therapy practitioners have distinct knowledge, skills, and qualities that contribute to the success of the occupational therapy process, described in this document as "cornerstones." A *cornerstone* can be defined as something of great importance on which everything else depends ("Cornerstone," n.d.), and the following cornerstones of occupational therapy help distinguish it from other professions:

- Core values and beliefs rooted in occupation (Cohn, 2019; Hinojosa et al., 2017)
- Knowledge of and expertise in the therapeutic use of occupation (Gillen, 2013; Gillen et al., 2019)
- Professional behaviors and dispositions (AOTA 2015a, 2015c)
- Therapeutic use of self (AOTA, 2015c; Taylor, 2020).

These cornerstones are not hierarchical; instead, each concept influences the others.

Occupational therapy cornerstones provide a fundamental foundation for practitioners from which to view clients and their occupations and facilitate the occupational therapy process. Practitioners develop the cornerstones over time through education, mentorship, and experience. In addition, the cornerstones are ever evolving, reflecting developments in occupational therapy practice and occupational science.

Many contributors influence each cornerstone. Like the cornerstones, the contributors are complementary and interact to provide a foundation for practitioners. The contributors include, but are not limited to, the following:

- Client-centered practice
- Clinical and professional reasoning
- Competencies for practice
- Cultural humility
- Ethics
- Evidence-informed practice
- Inter- and intraprofessional collaborations
- Leadership
- Lifelong learning
- Micro and macro systems knowledge
- Occupation-based practice
- Professionalism
- Professional advocacy
- Self-advocacy
- Self-reflection
- Theory-based practice.

Domain

Exhibit 1 identifies the aspects of the occupational therapy domain: occupations, contexts, performance patterns, performance skills, and client factors. All aspects of the domain have a dynamic interrelatedness. All aspects are of equal value and together interact to affect occupational identity, health, well-being, and participation in life.

Occupational therapists are skilled in evaluating all aspects of the domain, the interrelationships among the aspects, and the client within context. Occupational therapy practitioners recognize the importance and

Exhibit 1. Aspects of the Occupational Therapy Domain
All aspects of the occupational therapy domain transact to support engagement, participation, and health. This exhibit does not imply a hierarchy.

Occupations	Contexts	Performance Patterns	Performance Skills	Client Factors
Activities of daily living (ADLs) Instrumental activities of daily living (IADLs) Health management Rest and sleep Education Work Play Leisure Social participation	Environmental factors Personal factors	Habits Routines Roles Rituals	Motor skills Process skills Social interaction skills	Values, beliefs, and spirituality Body functions Body structures

impact of the mind–body–spirit connection on engagement and participation in daily life. Knowledge of the transactional relationship and the significance of meaningful and productive occupations forms the basis for the use of occupations as both the means and the ends of interventions (Trombly, 1995). This knowledge sets occupational therapy apart as a distinct and valuable service (Hildenbrand & Lamb, 2013) for which a focus on the whole is considered stronger than a focus on isolated aspects of human functioning.

The discussion that follows provides a brief explanation of each aspect of the domain. Tables included at the end of the document provide additional descriptions and definitions of terms.

Occupations

Occupations are central to a client's (person's, group's, or population's) health, identity, and sense of competence and have particular meaning and value to that client. "In occupational therapy, *occupations* refer to the everyday activities that people do as individuals, in families, and with communities to occupy time and bring meaning and purpose to life. Occupations include things people need to, want to and are expected to do" (WFOT, 2012a, para. 2).

In the *OTPF–4,* the term *occupation* denotes personalized and meaningful engagement in daily life events by a specific client. Conversely, the term *activity* denotes a form of action that is objective and not related to a specific client's engagement or context (Schell et al., 2019) and, therefore, can be selected and designed to enhance occupational engagement by supporting the development of performance skills and performance patterns. Both occupations and activities are used as interventions by practitioners. For example, a practitioner may use the activity of chopping vegetables during an intervention to address fine motor skills with the ultimate goal of improving motor skills for the occupation of preparing a favorite meal. Participation in occupations is considered both the means and the end in the occupational therapy process.

Occupations occur in contexts and are influenced by the interplay among performance patterns, performance skills, and client factors. Occupations occur over time; have purpose, meaning, and perceived utility to the client; and can be observed by others (e.g., preparing a meal) or be known only to the person involved (e.g., learning through reading a textbook). Occupations can involve the execution of multiple activities for completion and can result in various outcomes.

The *OTPF–4* identifies a broad range of occupations categorized as 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). Within each of these nine broad categories of occupation are many specific occupations. For example, the broad category of IADLs has specific

occupations that include grocery shopping and money management.

When occupational therapy practitioners work with clients, they identify the types of occupations clients engage in individually or with others. Differences among clients and the occupations they engage in are complex and multidimensional. The client's perspective on how an occupation is categorized varies depending on that client's needs, interests, and contexts. Moreover, values attached to occupations are dependent on cultural and sociopolitical determinants (Wilcock & Townsend, 2019). For example, one person may perceive gardening as leisure, whereas another person, who relies on the food produced from that garden to feed their family or community, may perceive it as work. Additional examples of occupations for persons, groups, and populations can be found in Table 3.

The ways in which clients prioritize engagement in selected occupations may vary at different times. For example, clients in a community psychiatric rehabilitation setting may prioritize registering to vote during an election season and food preparation during holidays. The unique features of occupations are noted and analyzed by occupational therapy practitioners, who consider all components of the engagement and use them effectively as both a therapeutic tool and a way to achieve the targeted outcomes of intervention.

The extent to which a client is engaged in a particular occupation is also important. Occupational therapy practitioners assess the client's ability to engage in *occupational performance,* defined as the accomplishment of the selected occupation resulting from the dynamic transaction among the client, their contexts, and the occupation. Occupations can contribute to a well-balanced and fully functional lifestyle or to a lifestyle that is out of balance and characterized by occupational dysfunction. For example, excessive work without sufficient regard for other aspects of life, such as sleep or relationships, places clients at risk for health problems. External factors, including war, natural disasters, or extreme poverty, may hinder a client's ability to create balance or engage in certain occupations (AOTA, 2017b; McElroy et al., 2012).

Because occupational performance does not exist in a vacuum, context must always be considered. For example, for a client who lives in food desert, lack of access to a grocery store may limit their ability to have balance in their performance of IADLs such as cooking and grocery shopping or to follow medical advice from health care professionals on health management and preparation of nutritious meals. For this client, the limitation is not caused by impaired client factors or performance skills but rather is shaped by the context in which the client functions. This context may include policies that resulted in the decline of commercial properties in the area, a socioeconomic status that does not enable the client to live in an area with access to a grocery store, and a social environment in which lack of access to fresh food is weighed as less important than the social supports the community provides.

Occupational therapy practitioners recognize that health is supported and maintained when clients are able to engage in home, school, workplace, and community life. Thus, practitioners are concerned not only with occupations but also with the variety of factors that disrupt or empower those occupations and influence clients' engagement and participation in positive health-promoting occupations (Wilcock & Townsend, 2019).

Although engagement in occupations is generally considered a positive outcome of the occupational therapy process, it is important to consider that a client's history might include negative, traumatic, or unhealthy occupational participation (Robinson Johnson & Dickie, 2019). For example, a person who has experienced a traumatic sexual encounter might negatively perceive and react to engagement in sexual intimacy. A person with an eating disorder might engage in eating in a maladaptive way, deterring health management and physical health.

In addition, some occupations that are meaningful to a client might also hinder performance in other occupations or negatively affect health. For example, a person who spends a disproportionate amount of time playing video games may develop a repetitive stress injury and may have less balance in their time spent on IADLs and other forms of social participation. A client engaging in the recreational use of prescription pain medications may experience barriers to participation in previously

important occupations such as work or spending time with family.

Occupations have the capacity to support or promote other occupations. For example, children engage in play to develop the performance skills that later facilitate engagement in leisure and work. Adults may engage in social participation and leisure with an intimate partner that may improve satisfaction with sexual activity. The goal of engagement in sleep and health management includes maintaining or improving performance of work, leisure, social participation, and other occupations.

Occupations are often shared and done with others. Those that implicitly involve two or more individuals are termed *co-occupations* (Zemke & Clark, 1996). Co-occupations are the most interactive of all social occupations. Central to the concept of co-occupation is that two or more individuals share a high level of physicality, emotionality, and intentionality (Pickens & Pizur-Barnekow, 2009). In addition, co-occupations can be parallel (different occupations in close proximity to others; e.g., reading while others listen to music when relaxing at home) and shared (same occupation but different activities; e.g., preparing different dishes for a meal; Zemke & Clark, 1996).

Caregiving is a co-occupation that requires active participation by both the caregiver and the recipient of care. For the co-occupations required during parenting, the socially interactive routines of eating, feeding, and comforting may involve the parent, a partner, the child, and significant others (Olson, 2004). The specific occupations inherent in this social interaction are reciprocal, interactive, and nested (Dunlea, 1996; Esdaile & Olson, 2004). Consideration of co-occupations by practitioners supports an integrated view of the client's engagement in the context of relationship to significant others.

Occupational participation can be considered independent whether it occurs individually or with others. It is important to acknowledge that clients can be independent in living regardless of the amount of assistance they receive while completing occupations. Clients may be considered independent even when they direct others (e.g., caregivers) in performing the actions necessary to participate, regardless of the amount or kind of assistance required, if clients are satisfied with their performance. In contrast to definitions of independence that imply direct physical interaction with the environment or objects within the environment, occupational therapy practitioners consider clients to be independent whether they perform the specific occupations by themselves, in an adapted or modified environment, with the use of various devices or alternative strategies, or while overseeing activity completion by others (AOTA, 2002b). For example, a person with spinal cord injury who directs a personal care assistant to assist them with ADLs is demonstrating independence in this essential aspect of their life.

It is also important to acknowledge that not all clients view success as independence. *Interdependence,* or co-occupational performance, can also be an indicator of personal success. How a client views success may be influenced by their client factors, including their culture.

Contexts

Context is a broad construct defined as the environmental and personal factors specific to each client (person, group, population) that influence engagement and participation in occupations. Context affects clients' access to occupations and the quality of and satisfaction with performance (WHO, 2008). Practitioners recognize that for people to truly achieve full participation, meaning, and purpose, they must not only function but also engage comfortably within their own distinct combination of contexts.

In the literature, the terms *environment* and *context* often are used interchangeably, but this may result in confusion when describing aspects of situations in which occupational engagement takes place. Understanding the contexts in which occupations can and do occur provides practitioners with insights into the overarching, underlying, and embedded influences of environmental factors and personal factors on engagement in occupations.

Environmental Factors

Environmental factors are aspects of the physical, social, and attitudinal surroundings in which people live and

conduct their lives (Table 4). Environmental factors influence functioning and disability and have positive aspects (facilitators) or negative aspects (barriers or hindrances; WHO, 2008). Environmental factors include

- *Natural environment and human-made changes to the environment:* Animate and inanimate elements of the natural or physical environment and components of that environment that have been modified by people, as well as characteristics of human populations within that environment. Engagement in human occupation influences the sustainability of the natural environment, and changes to human behavior can have a positive impact on the environment (Dennis et al., 2015).
- *Products and technology:* Natural or human-made products or systems of products, equipment, and technology that are gathered, created, produced, or manufactured.
- *Support and relationships:* People or animals that provide practical physical or emotional support, nurturing, protection, assistance, and connections to other persons in the home, workplace, or school or at play or in other aspects of daily occupations.
- *Attitudes:* Observable evidence of customs, practices, ideologies, values, norms, factual beliefs, and religious beliefs held by people other than the client.
- *Services, systems, and policies:* Benefits, structured programs, and regulations for operations provided by institutions in various sectors of society designed to meet the needs of persons, groups, and populations.

When people interact with the world around them, environmental factors can either enable or restrict participation in meaningful occupations and can present barriers to or supports and resources for service delivery. Examples of environmental barriers that restrict participation include the following:

- For persons, doorway widths that do not allow for wheelchair passage
- For groups, absence of healthy social opportunities for those abstaining from alcohol use
- For populations, businesses that are not welcoming to people who identify as LGBTQ+. (*Note:* In this document, *LGBTQ+* is used to represent the large and diverse communities and individuals with nonmajority sexual orientations and gender identities.)

Addressing these barriers, such as by widening a doorway to allow access, results in environmental supports that enable participation. A client who has difficulty performing effectively in one context may be successful when the natural environment has human-made modifications or if the client uses applicable products and technology. In addition, occupational therapy practitioners must be aware of norms related to, for example, eating or deference to medical professionals when working with someone from a culture or socioeconomic status that differs from their own.

Personal Factors

Personal factors are the unique features of a person that are not part of a health condition or health state and that constitute the particular background of the person's life and living (Table 5). Personal factors are internal influences affecting functioning and disability and are not considered positive or negative but rather reflect the essence of the person—"who they are." When clients provide demographic information, they are typically describing personal factors. Personal factors also include customs, beliefs, activity patterns, behavioral standards, and expectations accepted by the society or cultural group of which a person is a member.

Personal factors are generally considered to be enduring, stable attributes of the person, although some personal factors change over time. They include, but are not limited to, the following:

- Chronological age
- Sexual orientation (sexual preference, sexual identity)
- Gender identity
- Race and ethnicity
- Cultural identification and attitudes

- Social background, social status, and socioeconomic status
- Upbringing and life experiences
- Habits and past and current behavioral patterns
- Psychological assets, temperament, unique character traits, and coping styles
- Education
- Profession and professional identity
- Lifestyle
- Health conditions and fitness status (that may affect the person's occupations but are not the primary concern of the occupational therapy encounter).

For example, siblings share personal factors of race and age, yet for those separated at birth, environmental differences may result in divergent personal factors in terms of cultural identification, upbringing, and life experiences, producing different contexts for their individual occupational engagement. Whether separated or raised together, as siblings move through life, they may develop differences in sexual orientation, life experience, habits, education, profession, and lifestyle.

Groups and populations are often formed or identified on the basis of shared or similar personal factors that make possible occupational therapy assessment and intervention. Of course, individual members of a group or population differ in other personal factors. For example, a group of fifth graders in a community public school are likely to share age and, perhaps, socioeconomic status. Yet race, fitness, habits, and coping styles make each group member unlike the others. Similarly, a population of older adults living in an urban low-income housing community may have few personal factors in common other than age and current socioeconomic status.

Application of Context to Occupational Justice

Interwoven throughout the concept of context is that of *occupational justice,* defined as "a justice that recognizes occupational rights to inclusive participation in everyday occupations for all persons in society, regardless of age, ability, gender, social class, or other differences" (Nilsson & Townsend, 2010, p. 58). Occupational therapy's focus on engagement in occupations and occupational justice complements WHO's (2008) perspective on health. To broaden the understanding of the effects of disease and disability on health, WHO emphasized that health can be affected by the inability to carry out occupations and activities and participate in life situations caused by contextual barriers and by problems that exist in body structures and body functions. The *OTPF–4* identifies occupational justice as both an aspect of contexts and an outcome of intervention.

Occupational justice involves the concern that occupational therapy practitioners have with respect, fairness, and impartiality and equitable opportunities when considering the contexts of persons, groups, and populations (AOTA, 2015a). As part of the occupational therapy domain, practitioners consider how these aspects can affect the implementation of occupational therapy and the target outcome of participation. Practitioners recognize that for individuals to truly achieve full participation, meaning, and purpose, they must not only function but also engage comfortably within their own distinct combination of contexts (both environmental factors and personal factors).

Examples of contexts that can present occupational justice issues include the following:

- An alternative school placement for children with mental health and behavioral disabilities that provides academic support and counseling but limited opportunities for participation in sports, music programs, and organized social activities
- A residential facility for older adults that offers safety and medical support but provides little opportunity for engagement in the role-related occupations that were once a source of meaning
- A community that lacks accessible and inclusive physical environments and provides limited services and supports, making participation difficult or even dangerous for people who have disabilities (e.g., lack of screening facilities and services resulting in higher rates of breast cancer among community members)
- A community that lacks financial and other necessary resources, resulting in an adverse and

disproportionate impact of natural disasters and severe weather events on vulnerable populations.

Occupational therapy practitioners recognize areas of occupational injustice and work to support policies, actions, and laws that allow people to engage in occupations that provide purpose and meaning in their lives. By understanding and addressing the specific justice issues in contexts such as an individual's home, a group's shared job site, or a population's community center, practitioners promote occupational therapy outcomes that address empowerment and self-advocacy.

Performance Patterns

Performance patterns are the acquired habits, routines, roles, and rituals used in the process of engaging consistently in occupations and can support or hinder occupational performance (Table 6). Performance patterns help establish lifestyles (Uyeshiro Simon & Collins, 2017) and occupational balance (e.g., proportion of time spent in productive, restorative, and leisure occupations; Eklund et al., 2017; Wagman et al., 2015) and are shaped, in part, by context (e.g., consistency, work hours, social calendars) and cultural norms (Eklund et al., 2017; Larson & Zemke, 2003).

Time provides an organizational structure or rhythm for performance patterns (Larson & Zemke, 2003); for example, an adult goes to work every morning, a child completes homework every day after school, or an organization hosts a fundraiser every spring. The manner in which people think about and use time is influenced by biological rhythms (e.g., sleep–wake cycles), family of origin (e.g., amount of time a person is socialized to believe should be spent in productive occupations), work and social schedules (e.g., religious services held on the same day each week), and cyclic cultural patterns (e.g., birthday celebration with cake every year, annual cultural festival; Larson & Zemke, 2003). Other temporal factors influencing performance patterns are time management and time use. *Time management* is the manner in which a person, group, or population organizes, schedules, and prioritizes certain activities (Uyeshiro Simon & Collins, 2017). *Time use* is the manner in which a person manages their activity levels; adapts to changes in routines; and organizes their days, weeks, and years (Edgelow & Krupa, 2011).

Habits are specific, automatic adaptive or maladaptive behaviors. Habits may be healthy or unhealthy (e.g., exercising on a daily basis vs. smoking during every lunch break), efficient or inefficient (e.g., completing homework after school vs. in the few minutes before the school bus arrives), and supportive or harmful (e.g., setting an alarm clock before going to bed vs. not doing so; Clark, 2000; Dunn, 2000; Matuska & Barrett, 2019).

Routines are established sequences of occupations or activities that provide a structure for daily life; they can also promote or damage health (Fiese, 2007; Koome et al., 2012; Segal, 2004). Shared routines involve two or more people and take place in a similar manner regardless of the individuals involved (e.g., routines shared by parents to promote the health of their children; routines shared by coworkers to sort the mail; Primeau, 2000). Shared routines can be nested in co-occupations. For example, a young child's occupation of completing oral hygiene with the assistance of an adult is a part of the child's daily routine, and the adult who provides the assistance may also view helping the young child with oral hygiene as a part of the adult's own daily routine.

Roles have historically been defined as sets of behaviors expected by society and shaped by culture and context; they may be further conceptualized and defined by a person, group, or population (Kielhofner, 2008; Taylor, 2017). Roles are an aspect of occupational identity—that is, they help define who a person, group, or population believes themselves to be on the basis of their occupational history and desires for the future. Certain roles are often associated with specific activities and occupations; for example, the role of parent is associated with feeding children (Kielhofner, 2008; Taylor, 2017). When exploring roles, occupational therapy practitioners consider the complexity of identity and the limitations associated with assigning stereotypical occupations to specific roles (e.g., on the basis of gender). Practitioners also consider how clients construct their occupations and establish efficient and supportive habits and routines to achieve health outcomes, fulfill their perceived roles and

identity, and determine whether their roles reinforce their values and beliefs.

Rituals are symbolic actions with spiritual, cultural, or social meaning. Rituals contribute to a client's identity and reinforce the client's values and beliefs (Fiese, 2007; Segal, 2004). Some rituals (e.g., those associated with certain holidays) are associated with different seasons or times of the year (e.g., New Year's Eve, Independence Day), whereas others are associated with times of the day or days of the week (e.g., daily prayers, weekly family dinners).

Performance patterns are influenced by all other aspects of the occupational therapy domain and develop over time. Occupational therapy practitioners who consider clients' past and present behavioral and performance patterns are better able to understand the frequency and manner in which performance skills and healthy and unhealthy occupations are, or have been, integrated into clients' lives. Although clients may have the ability to engage in skilled performance, if they do not embed essential skills in a productive set of engagement patterns, their health, well-being, and participation may be negatively affected. For example, a person may have skills associated with proficient health literacy but not embed them into consistent routines (e.g., a dietitian who consistently chooses to eat fast food rather than prepare a healthy meal) or struggle with modifying daily performance patterns to access health systems effectively (e.g., a nurse who struggles to modify work hours to get a routine mammogram).

Performance Skills

Performance skills are observable, goal-directed actions and consist of motor skills, process skills, and social interaction skills (Fisher & Griswold, 2019; Table 7). The occupational therapist evaluates and analyzes performance skills during actual performance to understand a client's ability to perform an activity (i.e., smaller aspect of the larger occupation) in natural contexts (Fisher & Marterella, 2019). This evaluation requires analysis of the quality of the individual actions (performance skills) during actual performance. Regardless of the client population, the performance skills defined in this document are universal and provide the foundation for understanding performance (Fisher & Marterella, 2019).

Performance skills can be analyzed for all occupations with clients of any age and level of ability, regardless of the setting in which occupational therapy services are provided (Fisher & Marterella, 2019). Motor and process skills are seen during performance of an activity that involves the use of tangible objects, and social interaction skills are seen in any situation in which a person is interacting with others:

- *Motor skills* refer to how effectively a person moves self or interacts with objects, including positioning the body, obtaining and holding objects, moving self and objects, and sustaining performance.
- *Process skills* refer to how effectively a person organizes objects, time, and space, including sustaining performance, applying knowledge, organizing timing, organizing space and objects, and adapting performance.
- *Social interaction skills* refer to how effectively a person uses both verbal and nonverbal skills to communicate, including initiating and terminating, producing, physically supporting, shaping content of, maintaining flow of, verbally supporting, and adapting social interaction.

For example, when a client catches a ball, the practitioner can analyze how effectively they bend and reach for and then grasp the ball (motor skills). When a client cooks a meal, the practitioner can analyze how effectively they initiate and sequence the steps to complete the recipe in a logical order to prepare the meal in a timely and well-organized manner (process skills). Or when a client interacts with a friend at work, the practitioner can analyze the manner in which the client smiles, gestures, turns toward the friend, and responds to questions (social interaction skills). In these examples, many other motor skills, process skills, and social interaction skills are also used by the client.

By analyzing the client's performance within an occupation at the level of performance skills, the occupational therapist identifies effective and ineffective use of skills (Fisher & Marterella, 2019). The result of this

analysis indicates not only whether the person is able to complete an activity safely and independently but also the amount of physical effort and efficiency the client demonstrates in activities.

After the quality of occupational performance skills has been analyzed, the practitioner speculates about the reasons for decreased quality of occupational performance and determines the need to evaluate potential underlying causes (e.g., occupational demands, environmental factors, client factors; Fisher & Griswold, 2019). Performance skills are different from client factors (see the "Client Factors" section that follows), which include values, beliefs, and spirituality and body structures and functions (e.g., memory, strength) that reside within the person. Occupational therapy practitioners analyze performance skills as a client performs an activity, whereas client factors cannot be directly viewed during the performance of occupations. For example, the occupational therapy practitioner cannot directly view the client factors of cognitive ability or memory when a client is engaged in cooking but rather notes ineffective use of performance skills when the person hesitates to start a step or performs steps in an illogical order. The practitioner may then infer that a possible reason for the client's hesitation may be diminished memory and elect to further assess the client factor of cognition.

Similarly, context influences the quality of a client's occupational performance. After analyzing the client's performance skills while completing an activity, the practitioner can hypothesize how the client factors and context might have influenced the client's performance. Thus, client factors and contexts converge and may support or limit a person's quality of occupational performance.

Application of Performance Skills With Persons

When completing the analysis of occupational performance (described in the "Evaluation" section later in this document), the practitioner analyzes the client's challenges in performance and generates a hypothesis about gaps between current performance and effective performance and the need for occupational therapy services. To plan appropriate interventions, the practitioner considers the underlying reasons for the gaps, which may involve performance skills, performance patterns, and client factors. The hypothesis is generated on the basis of what the practitioner analyzes when the client is actually performing occupations.

Regardless of the client population, the universal performance skills defined in this section provide the foundations for understanding performance (Fisher & Marterella, 2019). The following example crosses many client populations. The practitioner observes as a client rushes through the steps of an activity toward completion. On the basis of what the client does, the practitioner may interpret this rushing as resulting from a lack of impulse control. This limitation may be seen in clients living with anxiety, attention deficit hyperactivity disorder, dementia, traumatic brain injury, and other clinical conditions. The behavior of rushing may be captured in motor performance skills of *manipulates, coordinates,* or *calibrates;* in process performance skills of *paces, initiates, continues,* or *organizes;* or in social interaction performance skills of *takes turn, transitions, times response,* or *times duration*. Understanding the client's specific occupational challenges enables the practitioner to determine the suitable intervention to address impulsivity to facilitate greater occupational performance. Clinical interventions then address the skills required for the client's specific occupational demands on the basis of their alignment with the universal performance skills (Fisher & Marterella, 2019). Thus, the application of universal performance skills guides practitioners in developing the intervention plan for specific clients to address the specific concerns occurring in the specific practice setting.

Application of Performance Skills With Groups

Analysis of performance skills is always focused on individuals (Fisher & Marterella, 2019). Thus, when analyzing performance skills with a group client, the occupational therapist always focuses on one individual at a time (Table 8). The therapist may choose to analyze some or all members of the group engaging in relevant group occupations over time as the group members contribute to the collective actions of the group.

If all members demonstrate effective performance skills, then the group client may achieve its collective outcomes. If one or more group members demonstrate ineffective performance skills, the collective outcomes may be diminished. Only in cases in which group members demonstrate ongoing limitations in performance skills that hinder the collective outcomes of the group would the practitioner recommend interventions for individual group members. Interventions would then be directed at those members demonstrating diminished performance skills to facilitate their contributions to the collective group outcomes.

Application of Performance Skills With Populations

Using an occupation-based approach to population health, occupational therapy addresses the needs of populations by enhancing occupational performance and participation for communities of people (see "Service Delivery" in the "Process" section). Service delivery to populations focuses on aggregates of people rather than on intervention for persons or groups; thus, it is not relevant to analyze performance skills at the person level in service delivery to populations.

Client Factors

Client factors are specific capacities, characteristics, or beliefs that reside within the person, group, or population and influence performance in occupations (Table 9). Client factors are affected by the presence or absence of illness, disease, deprivation, and disability, as well as by life stages and experiences. These factors can affect performance skills (e.g., a client may have weakness in the right arm [a client factor], affecting their ability to manipulate a button [a motor and process skill] to button a shirt; a child in a classroom may be nearsighted [a client factor], affecting their ability to copy from a chalkboard [a motor and process skill]).

In addition, client factors are affected by occupations, contexts, performance patterns, and performance skills. For example, a client in a controlled and calm environment might be able to problem solve to complete an occupation or activity, but when they are in a louder, more chaotic environment, their ability to process and plan may be adversely affected. It is through this interactive relationship that occupations and interventions to support occupations can be used to address client factors and vice versa.

Values, beliefs, and spirituality influence clients' motivation to engage in occupations and give their life or existence meaning. *Values* are principles, standards, or qualities considered worthwhile by the client who holds them. A *belief* is "something that is accepted, considered to be true, or held as an opinion" ("Belief," 2020). *Spirituality* is "a deep experience of meaning brought about by engaging in occupations that involve the enacting of personal values and beliefs, reflection, and intention within a supportive contextual environment" (Billock, 2005, p. 887). It is important to recognize spirituality "as dynamic and often evolving" (Humbert, 2016, p. 12).

Body functions and *body structures* refer to the "physiological function of body systems (including psychological functions) and anatomical parts of the body such as organs, limbs, and their components," respectively (WHO, 2008, p. 10). Examples of body functions include sensory, musculoskeletal, mental (affective, cognitive, perceptual), cardiovascular, respiratory, and endocrine functions. Examples of body structures include the heart and blood vessels that support cardiovascular function. Body structures and body functions are interrelated, and occupational therapy practitioners consider them when seeking to promote clients' ability to engage in desired occupations.

Occupational therapy practitioners understand that the presence, absence, or limitation of specific body functions and body structures does not necessarily determine a client's success or difficulty with daily life occupations. Occupational performance and client factors may benefit from supports in the physical, social, or attitudinal contexts that enhance or allow participation. It is through the process of assessing clients as they engage in occupations that practitioners are able to determine the transaction between client factors and performance skills; to create adaptations, modifications, and remediation; and to select occupation-based interventions that best promote enhanced participation.

Exhibit 2. Operationalizing the Occupational Therapy Process
Ongoing interaction among evaluation, intervention, and outcomes occurs throughout the occupational therapy process.

Evaluation
Occupational Profile • Identify the following: ◦ Why is the client seeking services, and what are the client's current concerns relative to engaging in occupations and in daily life activities? ◦ In what occupations does the client feel successful, and what barriers are affecting their success in desired occupations? ◦ What is the client's occupational history (i.e., life experiences)? ◦ What are the client's values and interests? ◦ What aspects of their contexts (environmental and personal factors) does the client see as supporting engagement in desired occupations, and what aspects are inhibiting engagement? ◦ How are the client's performance patterns supporting or limiting occupational performance and engagement? ◦ What are the client's patterns of engagement in occupations, and how have they changed over time? ◦ What client factors does the client see as supporting engagement in desired occupations, and what aspects are inhibiting engagement (e.g., pain, active symptoms)? ◦ What are the client's priorities and desired targeted outcomes related to occupational performance, prevention, health and wellness, quality of life, participation, role competence, well-being, and occupational justice? Analysis of Occupational Performance • The analysis of occupational performance involves one or more of the following: ◦ Synthesizing information from the occupational profile to determine specific occupations and contexts that need to be addressed ◦ Completing an occupational or activity analysis to identify the demands of occupations and activities on the client ◦ Selecting and using specific assessments to measure the quality of the client's performance or performance deficits while completing occupations or activities relevant to desired occupations, noting the effectiveness of performance skills and performance patterns ◦ Selecting and using specific assessments to measure client factors that influence performance skills and performance patterns ◦ Selecting and administering assessments to identify and measure more specifically the client's contexts and their impact on occupational performance. Synthesis of Evaluation Process • This synthesis may include the following: ◦ Determining the client's values and priorities for occupational participation ◦ Interpreting the assessment data to identify supports and hindrances to occupational performance ◦ Developing and refining hypotheses about the client's occupational performance strengths and deficits ◦ Considering existing support systems and contexts and their ability to support the intervention process ◦ Determining desired outcomes of the intervention ◦ Creating goals in collaboration with the client that address the desired outcomes ◦ Selecting outcome measures and determining procedures to measure progress toward the goals of intervention, which may include repeating assessments used in the evaluation process.
Intervention
Intervention Plan • Develop the plan, which involves selecting ◦ Objective and measurable occupation-based goals and related time frames; ◦ Occupational therapy intervention approach or approaches, such as create or promote, establish or restore, maintain, modify, or prevent; and ◦ Methods for service delivery, including what types of intervention will be provided, who will provide the interventions, and which service delivery approaches will be used. • Consider potential discharge needs and plans. • Make recommendations or referrals to other professionals as needed.

(Continued)

Exhibit 2. Operationalizing the Occupational Therapy Process *(cont'd)*

Intervention Implementation • Select and carry out the intervention or interventions, which may include the following: ◦ Therapeutic use of occupations and activities ◦ Interventions to support occupations ◦ Education ◦ Training ◦ Advocacy ◦ Self-advocacy ◦ Group intervention ◦ Virtual interventions. • Monitor the client's response through ongoing evaluation and reevaluation. Intervention Review • Reevaluate the plan and how it is implemented relative to achieving outcomes. • Modify the plan as needed. • Determine the need for continuation or discontinuation of services and for referral to other services.
Outcomes
Outcomes • Select outcome measures early in the occupational therapy process (see the "Evaluation" section of this table) on the basis of their properties: ◦ Valid, reliable, and appropriately sensitive to change in clients' occupational performance ◦ Consistent with targeted outcomes ◦ Congruent with the client's goals ◦ Able to predict future outcomes. • Use outcome measures to measure progress and adjust goals and interventions by ◦ Comparing progress toward goal achievement with outcomes throughout the intervention process and ◦ Assessing outcome use and results to make decisions about the future direction of intervention (e.g., continue, modify, transition, discontinue, provide follow-up, refer for other service).

Client factors can also be understood as pertaining to group and population clients and may be used to help define the group or population. Although client factors may be described differently when applied to a group or population, the underlying principles do not change substantively. Client factors of a group or population are explored by performing needs assessments, and interventions might include program development and strategic planning to help the members engage in occupations.

Process

This section operationalizes the process undertaken by occupational therapy practitioners when providing services to clients. Exhibit 2 summarizes the aspects of the occupational therapy process.

The *occupational therapy process* is the client-centered delivery of occupational therapy services. The three-part process includes (1) evaluation and (2) intervention to achieve (3) targeted outcomes and occurs within the purview of the occupational therapy domain (Table 10). The process is facilitated by the distinct perspective of occupational therapy practitioners engaging in professional reasoning, analyzing occupations and activities, and collaborating with clients. The cornerstones of occupational therapy practice underpin the process of service delivery.

Overview of the Occupational Therapy Process

Many professions use a similar process of evaluating, intervening, and targeting outcomes. However, only occupational therapy practitioners focus on the therapeutic use of occupations to promote health, well-

being, and participation in life. Practitioners use professional reasoning to select occupations as primary methods of intervention throughout the process. To help clients achieve desired outcomes, practitioners facilitate interactions among the clients, their contexts, and the occupations in which they engage. This perspective is based on the theories, knowledge, and skills generated and used by the profession and informed by available evidence.

Analyzing occupational performance requires an understanding of the complex and dynamic interaction among the demands of the occupation and the client's contexts, performance patterns, performance skills, and client factors. Occupational therapy practitioners fully consider each aspect of the domain and gauge the influence of each on the others, individually and collectively. By understanding how these aspects influence one another, practitioners can better evaluate how each aspect contributes to clients' participation and performance-related concerns and potentially to interventions that support occupational performance and participation.

The occupational therapy process is fluid and dynamic, allowing practitioners and clients to maintain their focus on the identified outcomes while continually reflecting on and changing the overall plan to accommodate new developments and insights along the way, including information gained from inter- and intraprofessional collaborations. The process may be influenced by the context of service delivery (e.g., setting, payer requirements); however, the primary focus is always on occupation.

Service Delivery Approaches

Various service delivery approaches are used when providing skilled occupational therapy services, of which intra- and interprofessional collaborations are a key component. It is imperative to communicate with all relevant providers and stakeholders to ensure a collaborative approach to the occupational therapy process. These providers and stakeholders can be within the profession (e.g., occupational therapist and occupational therapy assistant collaborating to work with a student in a school, a group of practitioners collaborating to develop community-based mental health programming in their region) or outside the profession (e.g., a team of rehabilitation and medical professionals on an inpatient hospital unit; a group of employees, human resources staff, and health and safety professionals in a large organization working with an occupational therapy practitioner on workplace wellness initiatives).

Regardless of the service delivery approach, the individual client may not be the exclusive focus of the occupational therapy process. For example, the needs of an at-risk infant may be the initial impetus for intervention, but the concerns and priorities of the parents, extended family, and funding agencies are also considered. Occupational therapy practitioners understand and focus intervention to include the issues and concerns surrounding the complex dynamics among the client, caregiver, family, and community. Similarly, services addressing independent living skills for adults coping with serious mental illness or chronic health conditions may also address the needs and expectations of state and local service agencies and of potential employers.

Direct Services. Services are provided directly to clients using a collaborative approach in settings such as hospitals, clinics, industry, schools, homes, and communities. Direct services include interventions completed when in direct contact with the client through various mechanisms such as meeting in person, leading a group session, and interacting with clients and families through telehealth systems (AOTA, 2018c).

Examples of person-level direct service delivery include working with an adult on an inpatient rehabilitation unit, working with a child in the classroom while collaborating with the teacher to address identified goals, and working with an adolescent in an outpatient setting. Direct group interventions include working with a cooking group in a skilled nursing facility, working with an outpatient feeding group, and working with a handwriting group in a school. Examples of population-level direct services include implementing a large-scale healthy lifestyle or safe driver initiative in the community and

delivering a training program for brain injury treatment facilities regarding safely accessing public transportation. An occupational therapy approach to population health focuses on aggregates or communities of people and the many factors that influence their health and well-being: "Occupational therapy practitioners develop and implement occupation-based health approaches to enhance occupational performance and participation, [quality of life], and occupational justice for populations" (AOTA, 2020b, p. 3).

Indirect Services. When providing services to clients indirectly on their behalf, occupational therapy practitioners provide consultation to entities such as teachers, multidisciplinary teams, and community planning agencies. For example, a practitioner may consult with a group of elementary school teachers and administrators about opportunities for play during recess to promote health and well-being. A practitioner may also provide consultation on inclusive design to a park district or civic organization to address how the built and natural environments can support occupational performance and engagement. In addition, a practitioner may consult with a business regarding the work environment, ergonomic modifications, and compliance with the Americans With Disabilities Act of 1990 (Pub. L. 101-336).

Occupational therapy practitioners can advocate indirectly on behalf of their clients at the person, group, and population levels to ensure their occupational needs are met. For example, an occupational therapy practitioner may advocate for funding to support the costs of training a service animal for an individual client. A practitioner working with a group client may advocate for meeting space in the community for a peer support group of transgender youth. Examples of population-level advocacy include talking with legislators about improving transportation for older adults, developing services for people with disabilities to support their living and working in the community of their choice, establishing meaningful civic engagement opportunities for underserved youth, and assisting in the development of policies that address inequities in access to health care.

Additional Approaches. Occupational therapy practitioners use additional approaches that may also be classified as direct or indirect for persons, groups, and populations. Examples include, but are not limited to, case management (AOTA, 2018b), telehealth (AOTA, 2018c), episodic care (Centers for Medicare & Medicaid Services, 2019), and family-centered care approaches (Hanna & Rodger, 2002).

Practice Within Organizations and Systems

Organization- or systems-level practice is a valid and important part of occupational therapy for several reasons. First, organizations serve as a mechanism through which occupational therapy practitioners provide interventions to support participation of people who are members of or served by the organization (e.g., falls prevention programming in a skilled nursing facility, ergonomic changes to an assembly line to reduce musculoskeletal disorders). Second, organizations support occupational therapy practice and practitioners as stakeholders in carrying out the mission of the organization. Practitioners have the responsibility to ensure that services provided to organizational stakeholders (e.g., third-party payers, employers) are of high quality and delivered in an ethical, efficient, and efficacious manner.

Finally, organizations employ occupational therapy practitioners in roles in which they use their knowledge of occupation and the profession of occupational therapy indirectly. For example, practitioners can serve in positions such as dean, administrator, and corporate leader (e.g., CEO, business owner). In these positions, practitioners support and enhance the organization but do not provide occupational therapy services in the traditional sense. Occupational therapy practitioners can also serve organizations in roles such as client advocate, program coordinator, transition manager, service or care coordinator, health and wellness coach, and community integration specialist.

Occupational and Activity Analysis

Occupational therapy practitioners are skilled in the analysis of occupations and activities and apply this important skill throughout the occupational therapy

process. Occupational analysis is performed with an understanding of "the specific situation of the client and therefore . . . the specific occupations the client wants or needs to do in the actual context in which these occupations are performed" (Schell et al., 2019, p. 322). In contrast, activity analysis is generic and decontextualized in its purpose and serves to develop an understanding of typical activity demands within a given culture. Many professions use activity analysis, whereas occupational analysis requires the understanding of occupation as distinct from activity and brings an occupational therapy perspective to the analysis process (Schell et al., 2019).

Occupational therapy practitioners analyze the demands of an occupation or activity to understand the performance patterns, performance skills, and client factors that are required to perform it (Table 11). Depending on the purpose of the analysis, the meaning ascribed to and the contexts for performance of and engagement in the occupation or activity are considered either from a client-specific subjective perspective (occupational analysis) or a general perspective within a given culture (activity analysis).

Therapeutic Use of Self

An integral part of the occupational therapy process is *therapeutic use of self,* 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 (Taylor & Van Puymbrouck, 2013). Occupational therapy practitioners use professional reasoning to help clients make sense of the information they are receiving in the intervention process, discover meaning, and build hope (Taylor, 2019; Taylor & Van Puymbrouck, 2013). *Empathy* is the emotional exchange between occupational therapy practitioners and clients that allows more open communication, ensuring that practitioners connect with clients at an emotional level to assist them with their current life situation.

Practitioners develop a collaborative relationship with clients to understand their experiences and desires for intervention. The collaborative approach used throughout the process honors the contributions of clients along with practitioners. Through the use of interpersonal communication skills, practitioners shift the power of the relationship to allow clients more control in decision making and problem solving, which is essential to effective intervention. Clients have identified the therapeutic relationship as critical to the outcome of occupational therapy intervention (Cole & McLean, 2003).

Clients bring to the occupational therapy process their knowledge about their life experiences and their hopes and dreams for the future. They identify and share their needs and priorities. Occupational therapy practitioners must create an inclusive, supportive environment to enable clients to feel safe in expressing themselves authentically. To build an inclusive environment, practitioners can take actions such as pursuing education on gender-affirming care, acknowledging systemic issues affecting underrepresented groups, and using a lens of cultural humility throughout the occupational therapy process (AOTA, 2020c; Hammell, 2013).

Occupational therapy practitioners bring to the therapeutic relationship their knowledge about how engagement in occupation affects health, well-being, and participation; they use this information, coupled with theoretical perspectives and professional reasoning, to critically evaluate, analyze, describe, and interpret human performance. Practitioners and clients, together with caregivers, family members, community members, and other stakeholders (as appropriate), identify and prioritize the focus of the intervention plan.

Clinical and Professional Reasoning

Throughout the occupational therapy process, practitioners are continually engaged in clinical and professional reasoning about a client's occupational performance. The term *professional reasoning* is used throughout this document as a broad term to encompass reasoning that occurs in all settings (Schell, 2019). Professional reasoning enables practitioners to

- Identify the multiple demands, required skills, and potential meanings of the activities and occupations and
- Gain a deeper understanding of the interrelationships among aspects of the domain that affect performance and that support client-centered interventions and outcomes.

Occupational therapy practitioners use theoretical principles and models, knowledge about the effects of conditions on participation, and available evidence on the effectiveness of interventions to guide their reasoning. Professional reasoning ensures the accurate selection and application of client-centered evaluation methods, interventions, and outcome measures. Practitioners also apply their knowledge and skills to enhance clients' participation in occupations and promote their health and well-being regardless of the effects of disease, disability, and occupational disruption or deprivation.

Evaluation

The evaluation process is focused on finding out what the client wants and needs to do; determining what the client can do and has done; and identifying supports and barriers to health, well-being, and participation. Evaluation occurs during the initial and all subsequent interactions with a client. The type and focus of the evaluation differ depending on the practice setting; however, all evaluations should assess the complex and multifaceted needs of each client.

The evaluation consists of the occupational profile and the analysis of occupational performance, which are synthesized to inform the intervention plan (Hinojosa et al., 2014). Although it is the responsibility of the occupational therapist to initiate the evaluation process, both occupational therapists and occupational therapy assistants may contribute to the evaluation, following which the occupational therapist completes the analysis and synthesis of information for the development of the intervention plan (AOTA, 2020a). The occupational profile includes information about the client's needs, problems, and concerns about performance in occupations. The analysis of occupational performance focuses on collecting and interpreting information specifically to identify supports and barriers related to occupational performance and establish targeted outcomes.

Although the *OTPF–4* describes the components of the evaluation process separately and sequentially, the exact manner in which occupational therapy practitioners collect client information is influenced by client needs, practice settings, and frames of reference or practice models. The evaluation process for groups and populations mirrors that for individual clients.

In some settings, the occupational therapist first completes a screening or consultation to determine the appropriateness of a full occupational therapy evaluation (Hinojosa et al., 2014). This process may include

- Review of client history (e.g., medical, health, social, or academic records),
- Consultation with an interprofessional or referring team, and
- Use of standardized or structured screening instruments.

The screening or consultation process may result in the development of a brief occupational profile and recommendations for full occupational therapy evaluation and intervention (Hinojosa et al., 2014).

Occupational Profile

The *occupational profile* is a summary of a client's (person's, group's, or population's) occupational history and experiences, patterns of daily living, interests, values, needs, and relevant contexts (AOTA, 2017a). Developing the occupational profile provides the occupational therapy practitioner with an understanding of the client's perspective and background.

Using a client-centered approach, the occupational therapy practitioner gathers information to understand what is currently important and meaningful to the client (i.e., what the client wants and needs to do) and to identify past experiences and interests that may assist in the understanding of current issues and problems. During the process of collecting this information, the client, with the assistance of the practitioner, identifies priorities and desired

targeted outcomes that will lead to the client's engagement in occupations that support participation in daily life. Only clients can identify the occupations that give meaning to their lives and select the goals and priorities that are important to them. By valuing and respecting clients' input, practitioners help foster their involvement and can more effectively guide interventions.

Occupational therapy practitioners collect information for the occupational profile at the beginning of contact with clients to establish client-centered outcomes. Over time, practitioners collect additional information, refine the profile, and ensure that the additional information is reflected in changes subsequently made to targeted outcomes. The process of completing and refining the occupational profile varies by setting and client and may occur continuously throughout the occupational therapy process.

Information gathering for the occupational profile may be completed in one session or over a longer period while working with the client. For clients who are unable to participate in this process, their profile may be compiled through interaction with family members or other significant people in their lives. Information for the occupational profile may also be gathered from available and relevant records.

Obtaining information for the occupational profile through both formal and informal interview techniques and conversation is a way to establish a therapeutic relationship with clients and their support network. Techniques used should be appropriate and reflective of clients' preferred method and style of communication (e.g., use of a communication board, translation services). Practitioners may use AOTA's Occupational Profile Template as a guide to completing the occupational profile (AOTA, 2017a). The information obtained through the occupational profile contributes to an individualized approach in the evaluation, intervention planning, and intervention implementation stages. Information is collected in the following areas:

- Why is the client seeking services, and what are the client's current concerns relative to engaging in occupations and in daily life activities?
- In what occupations does the client feel successful, and what barriers are affecting their success in desired occupations?
- What is the client's occupational history (i.e., life experiences)?
- What are the client's values and interests?
- What aspects of their contexts (environmental and personal factors) does the client see as supporting engagement in desired occupations, and what aspects are inhibiting engagement?
- How are the client's performance patterns supporting or limiting occupational performance and engagement?
- What are the client's patterns of engagement in occupations, and how have they changed over time?
- What client factors does the client see as supporting engagement in desired occupations, and what aspects are inhibiting engagement (e.g., pain, active symptoms)?
- What are the client's priorities and desired targeted outcomes related to occupational performance, prevention, health and wellness, quality of life, participation, role competence, well-being, and occupational justice?

After the practitioner collects profile data, the occupational therapist views the information and develops a working hypothesis regarding possible reasons for the identified problems and concerns. Reasons could include impairments in performance skills, performance patterns, or client factors or barriers within relevant contexts. In addition, the therapist notes the client's strengths and supports in all areas because these can inform the intervention plan and affect targeted outcomes.

Analysis of Occupational Performance

Occupational performance is the accomplishment of the selected occupation resulting from the dynamic transaction among the client, their contexts, and the occupation. In the *analysis of occupational performance,* the practitioner identifies the client's ability to effectively complete desired occupations. The client's assets and limitations or potential problems are more specifically determined through

assessment tools designed to analyze, measure, and inquire about factors that support or hinder occupational performance.

Multiple methods often are used during the evaluation process to assess the client, contexts, occupations, and occupational performance. Methods may include observation and analysis of the client's performance of specific occupations and assessment of specific aspects of the client or their performance. The approach to the analysis of occupational performance is determined by the information gathered through the occupational profile and influenced by models of practice and frames of reference appropriate to the client and setting. The analysis of occupational performance involves one or more of the following:

- Synthesizing information from the occupational profile to determine specific occupations and contexts that need to be addressed
- Completing an occupational or activity analysis to identify the demands of occupations and activities on the client
- Selecting and using specific assessments to measure the quality of the client's performance or performance deficits while completing occupations or activities relevant to desired occupations, noting the effectiveness of performance skills and performance patterns
- Selecting and using specific assessments to measure client factors that influence performance skills and performance patterns
- Selecting and administering assessments to identify and measure more specifically the client's contexts and their impact on occupational performance.

Occupational performance may be measured through standardized, formal, and structured assessment tools, and when necessary informal approaches may also be used (Asher, 2014). Standardized assessments are preferred, when available, to provide objective data about various aspects of the domain influencing engagement and performance. The use of valid and reliable assessments for obtaining trustworthy information can also help support and justify the need for occupational therapy services (Doucet & Gutman, 2013; Hinojosa & Kramer, 2014). In addition, the use of standardized outcome performance measures and outcome tools assists in establishing a baseline of occupational performance to allow for objective measurement of progress after intervention.

Synthesis of the Evaluation Process

The occupational therapist synthesizes the information gathered through the occupational profile and analysis of occupational performance. This process may include the following:

- Determining the client's values and priorities for occupational participation
- Interpreting the assessment data to identify supports and hindrances to occupational performance
- Developing and refining hypotheses about the client's occupational performance strengths and deficits
- Considering existing support systems and contexts and their ability to support the intervention process
- Determining desired outcomes of the intervention
- Creating goals in collaboration with the client that address the desired outcomes
- Selecting outcome measures and determining procedures to measure progress toward the goals of intervention, which may include repeating assessments used in the evaluation process.

Any outcome assessment used by occupational therapy practitioners must be consistent with clients' belief systems and underlying assumptions regarding their desired occupational performance. Occupational therapy practitioners select outcome assessments pertinent to clients' needs and goals, congruent with the practitioner's theoretical model of practice. Assessment selection is also based on the practitioner's knowledge of and available evidence for the psychometric properties of standardized measures or the rationale and protocols for nonstandardized structured measures. In addition, clients' perception of success in engaging in desired occupations is a vital part of outcome assessment (Bandura, 1986). The occupational therapist uses the synthesis and summary of information from the

evaluation and established targeted outcomes to guide the intervention process.

Intervention

The intervention process consists of services provided by occupational therapy practitioners in collaboration with clients to facilitate engagement in occupation related to health, well-being, and achievement of established goals consistent with the various service delivery models. Practitioners use the information about clients gathered during the evaluation and theoretical principles to select and provide occupation-based interventions to assist clients in achieving physical, mental, and social well-being; identifying and realizing aspirations; satisfying needs; and changing or coping with contextual factors.

Types of occupational therapy interventions are categorized as occupations and activities, interventions to support occupations, education and training, advocacy, group interventions, and virtual interventions (Table 12). Approaches to intervention include create or promote, establish or restore, maintain, modify, and prevent (Table 13). Across all types of and approaches to interventions, it is imperative that occupational therapy practitioners maintain an understanding of the *Occupational Therapy Code of Ethics* (AOTA, 2015a) and the *Standards of Practice for Occupational Therapy* (AOTA, 2015c).

Intervention is intended to promote health, well-being, and participation. *Health promotion* is "the process of enabling people to increase control over, and to improve, their health" (WHO, 1986). Wilcock (2006) stated,

> Following an occupation-based health promotion approach to well-being embraces a belief that the potential range of what people can do, be, and strive to become is the primary concern, and that health is a by-product. A varied and full occupational lifestyle will coincidentally maintain and improve health and well-being if it enables people to be creative and adventurous physically, mentally, and socially. (p. 315)

Interventions vary depending on the client—person, group, or population—and the context of service delivery. The actual term used for clients or groups of clients receiving occupational therapy varies among practice settings and delivery models. For example, when working in a hospital, the person or group might be referred to as a *patient* or *patients,* and in a school, the clients might be *students.* Early intervention requires practitioners to work with the family system as their clients. When practitioners provide consultation to an organization, clients may be called *consumers* or *members.* Terms used for others who may help or be served indirectly include, but are not limited to, *caregiver, teacher, parent, employer,* or *spouse*.

Intervention can also be in the form of collective services to groups and populations. Such intervention can occur as direct service provision or consultation. When consulting with an organization, occupational therapy practitioners may use strategic planning, change agent plans, and other program development approaches. Practitioners addressing the needs of a population direct their interventions toward current or potential diseases or conditions with the goal of enhancing the health, well-being, and participation of all members collectively. With groups and populations, the intervention focus is often on health promotion, prevention, and screening. Interventions may include (but are not limited to) self-management training, educational services, and environmental modification. For instance, occupational therapy practitioners may provide education on falls prevention and the impact of fear of falling to residents in an assisted living center or training to people facing a mental health challenge in use of the internet to identify and coordinate community resources that meet their needs.

Occupational therapy practitioners work with a wide variety of populations experiencing difficulty in accessing and engaging in healthy occupations because of factors such as poverty, homelessness, displacement, and discrimination. For example, practitioners can work with organizations providing services to refugees and asylum seekers to identify opportunities to reestablish occupational roles and enhance well-being and quality of life.

The intervention process is divided into three components: (1) intervention plan, (2) intervention implementation, and (3) intervention review. During the intervention process, the occupational therapy practitioner integrates information from the evaluation with theory,

practice models, frames of reference, and research evidence on interventions, including those that support occupations. This information guides the practitioner's professional reasoning in intervention planning, implementation, and review. Because evaluation is ongoing, revision may occur at any point during the intervention process.

Intervention Plan

The *intervention plan,* which directs the actions of occupational therapy practitioners, describes the occupational therapy approaches and types of interventions selected for use in reaching clients' targeted outcomes. The intervention plan is developed collaboratively with clients or their proxies and is directed by

- Client goals, values, beliefs, and occupational needs and
- Client health and well-being,

as well as by the practitioners' evaluation of

- Client occupational performance needs;
- Collective influence of the contexts, occupational or activity demands, and client factors on the client;
- Client performance skills and performance patterns;
- Context of service delivery in which the intervention is provided; and
- Best available evidence.

The occupational therapist designs the intervention plan on the basis of established treatment goals, addressing the client's current and potential situation related to engagement in occupations or activities. The intervention plan should reflect the priorities of the client, information on occupational performance gathered through the evaluation process, and targeted outcomes of the intervention. Intervention planning includes the following steps:

1. Developing the plan, which involves selecting
   - Objective and measurable occupation-based goals and related time frames;
   - Occupational therapy intervention approach or approaches; and
   - Methods for service delivery, including what types of interventions will be provided, who will provide the interventions, and which service delivery approaches will be used;
2. Considering potential discharge needs and plans; and
3. Making recommendations or referrals to other professionals as needed.

Steps 2 and 3 are discussed in the Outcomes section.

Intervention Implementation

Intervention implementation is the process of putting the intervention plan into action and occurs after the initial evaluation process and development of the intervention plan. Interventions may focus on a single aspect of the occupational therapy domain, such as a specific occupation, or on several aspects of the domain, such as contexts, performance patterns, and performance skills, as components of one or more occupations. Intervention implementation must always reflect the occupational therapy scope of practice; occupational practitioners should not perform interventions that do not use purposeful and occupation-based approaches (Gillen et al., 2019).

Intervention implementation includes the following steps (see Table 12):

- Select and carry out the intervention or interventions, which may include the following:
  - Therapeutic use of occupations and activities
  - Interventions to support occupations
  - Education
  - Training
  - Advocacy
  - Self-advocacy
  - Group intervention
  - Virtual interventions.
- Monitor the client's response through ongoing evaluation and reevaluation.

Given that aspects of the domain are interrelated and influence one another in a continuous, dynamic process, occupational therapy practitioners expect that a client's ability to adapt, change, and develop in one area will affect other areas. Because of this dynamic interrelationship, evaluation, including analysis of occupational performance, and intervention planning continue throughout the implementation process. In addition, intervention implementation includes monitoring of the client's response to specific interventions and progress toward goals.

Intervention Review

Intervention review is the continuous process of reevaluating and reviewing the intervention plan, the effectiveness of its delivery, and progress toward outcomes. As during intervention planning, this process includes collaboration with the client to identify progress toward goals and outcomes. Reevaluation and review may lead to change in the intervention plan. Practitioners should review best practices for using process indicators and, as appropriate, modify the intervention plan and monitor progress using outcome performance measures and outcome tools. Intervention review includes the following steps:

1. Reevaluating the plan and how it is implemented relative to achieving outcomes
2. Modifying the plan as needed
3. Determining the need for continuation or discontinuation of occupational therapy services and for referral to other services.

Outcomes

Outcomes emerge from the occupational therapy process and describe the results clients can achieve through occupational therapy intervention (Table 14). The outcomes of occupational therapy are multifaceted and may occur in all aspects of the domain of concern. Outcomes should be measured with the same methods used at evaluation and determined through comparison of the client's status at evaluation with the client's status at discharge or transition. Results of occupational therapy services are established using outcome performance measures and outcome tools.

Outcomes are directly related to the interventions provided and to the targeted occupations, performance patterns, performance skills, client factors, and contexts. Outcomes may be traced to improvement in areas of the domain, such as performance skills and client factors, but should ultimately be reflected in clients' ability to engage in their desired occupations. Outcomes targeted in occupational therapy can be summarized as

- Occupational performance,
- Prevention,
- Health and wellness,
- Quality of life,
- Participation,
- Role competence,
- Well-being, and
- Occupational justice.

Occupational adaptation, or the client's effective and efficient response to occupational and contextual demands (Grajo, 2019), is interwoven through all of these outcomes.

The impact of outcomes and the way they are defined are specific to clients (persons, groups, or populations) and to other stakeholders such as payers and regulators. Outcomes and their documentation vary by practice setting and are influenced by the stakeholders in each setting (AOTA, 2018a).

The focus on outcomes is woven throughout the process of occupational therapy. During evaluation, occupational therapy practitioners and clients (and often others, such as parents and caregivers) collaborate to identify targeted outcomes related to engagement in valued occupations or daily life activities. These outcomes are the basis for development of the intervention plan. During intervention implementation and review, clients and practitioners may modify targeted outcomes to accommodate changing needs, contexts, and performance abilities. Ultimately, the intervention process should result in the achievement of outcomes related to

health, well-being, and participation in life through engagement in occupation.

Outcome Measurement

Objective outcomes are measurable and tangible aspects of improved performance. Outcome measurement is sometimes derived from standardized assessments, with results reflected in numerical data following specific scoring instructions. These data quantify a client's response to intervention in a way that can be used by all relevant stakeholders. Objective outcome measures are selected early in the occupational therapy process on the basis of properties showing that they are

- Valid, reliable, and appropriately sensitive to change in the client's occupational performance,
- Consistent with targeted outcomes,
- Congruent with the client's goals, and
- Able to predict future outcomes.

Practitioners use objective outcome measures to measure progress and adjust goals and interventions by

- Comparing progress toward goal achievement with outcomes throughout the intervention process and
- Measuring and assessing results to make decisions about the future direction of intervention (e.g., continue, modify, transition, discontinue, provide follow-up, refer for other service).

In some settings, the focus is on *patient-reported outcomes* (PROs), which have been defined as "any report of the status of a patient's health condition that comes directly from the patient, without interpretation of the patient's response by a clinician or anyone else" (National Quality Forum, n.d., para. 1). PROs can be used as subjective measures of improved outlook, confidence, hope, playfulness, self-efficacy, sustainability of valued occupations, pain reduction, resilience, and perceived well-being. An example of a PRO is parents' greater perceived efficacy in parenting through a new understanding of their child's behavior (Cohn, 2001; Cohn et al., 2000; Graham et al., 2013). Another example is a report by an outpatient client with a hand injury of a reduction in pain during the IADL of doing laundry. "PRO tools measure what patients are able to do and how they feel by asking questions. These tools enable assessment of patient-reported health status for physical, mental, and social well-being" (National Quality Forum, n.d., para. 1).

Outcomes can also be designed for caregivers—for example, improved quality of life for both care recipient and caregiver. Studies of caregivers of people with dementia who received a home environmental intervention found fewer declines in occupational performance, enhanced mastery and skill, improved sense of self-efficacy and well-being, and less need for help with care recipients (Gitlin & Corcoran, 2005; Gitlin et al., 2001, 2003, 2008; Graff et al., 2007; Piersol et al., 2017).

Outcomes for groups that receive an educational intervention may include improved social interaction, increased self-awareness through peer support, a larger social network, or improved employee health and productivity. For example, education interventions for groups of employees on safety and workplace wellness have been shown to decrease work injuries and increase workplace productivity and satisfaction (Snodgrass & Amini, 2017).

Outcomes for populations may address health promotion, occupational justice and self-advocacy, health literacy, community integration, community living, and access to services. As with other occupational therapy clients, outcomes for populations are focused on occupational performance, engagement, and participation. For example, outcomes at the population level as a result of advocacy interventions include construction of accessible playground facilities, improved accessibility for polling places, and reconstruction of a school after a natural disaster.

Transition and Discontinuation

Transition is movement from one life role or experience to another. Transitions in services, like all life transitions, may require preparation, new knowledge, and time to accommodate to the new situation (Orentlicher et al., 2015). Transition planning may be needed, for example, when a client moves from one setting to another along the care continuum (e.g., acute hospital to skilled nursing

facility) or ages out of one program and into a new one (e.g., early intervention to elementary school). Collaboration among practitioners is necessary to ensure safety, well-being, and optimal outcomes for clients (Joint Commission, 2012, 2013).

Transition planning may include a referral to a provider within occupational therapy with advanced knowledge and skill (e.g., vestibular rehabilitation, driver evaluation, hand therapy) or outside the profession (e.g., psychologist, optometrist). Transition planning for groups and populations may be needed for a transition from one stage to another (e.g., middle school students in a life skills program who transition to high school) or from one set of needs to another (e.g., older adults in a community falls prevention program who transition to a community exercise program).

Planning for discontinuation of occupational therapy services begins at initial evaluation. Discontinuation of care occurs when the client ends services after meeting short- and long-term goals or chooses to discontinue receiving services (consistent with client-centered care). Safe and effective discharge planning for a person may include education on the use of new equipment, adaptation of an occupation, caregiver training, environmental modification, or determination of the appropriate setting for transition of care. A key goal of discharge planning for individual clients is prevention of readmission (Rogers et al., 2017). Discontinuation of services for groups and populations occurs when goals are met and sustainability plans are implemented for long-term success.

Conclusion

The *OTPF–4* describes the central concepts that ground occupational therapy practice and builds a common understanding of the basic tenets and distinct contribution of the profession. The occupational therapy domain and process are linked inextricably in a transactional relationship. An understanding of this relationship supports and guides the complex decision making required in the daily practice of occupational therapy and enhances practitioners' ability to define the reasons for and justify the provision of services when communicating with clients, family members, team members, employers, payers, and policymakers.

This edition of the *OTPF* provides a broader view than previous editions of occupational therapy as related to groups and populations and current and future occupational needs of clients. It also presents and describes the cornerstones of occupational therapy practice, which are discrete and critical qualities of occupational therapy practitioners that provide them with a foundation for success in the occupational therapy process. The *OTPF–4* highlights the distinct value of occupation and occupational therapy in contributing to health, well-being, and participation in life for persons, groups, and populations. This document can be used to advocate for the importance of occupational therapy in meeting society's current and future needs, ultimately advancing the profession to ensure a sustainable future.

Table 1. Examples of Clients: Persons, Groups, and Populations

Person	Group	Population
Health Management		
Middle-school student with diabetes interested in developing self-management skills to test blood sugar levels	Group of students with diabetes interested in problem solving the school setting's support for management of their condition	All students in the school provided with access to food choices to meet varying dietary needs and desires
Feeding		
Family of an infant with a history of prematurity and difficulty accepting nutrition orally	Families with infants experiencing feeding challenges advocating for the local hospital's rehabilitation services to develop infant feeding classes	Families of infants advocating for research and development of alternative nipple and bottle designs to address feeding challenges
Community Mobility		
Person with stroke who wants to return to driving	Stroke support group talking with elected leaders about developing community mobility resources	Stroke survivors advocating for increased access to community mobility options for all persons living with mobility limitations
Social Participation		
Young adult with IDD interested in increasing social participation	Young adults with IDD in a transition program sponsoring leisure activities in which all may participate in valued social relationships	Young adults with IDD educating their community about their need for inclusion in community-based social and leisure activities
Home Establishment and Management		
Person living with SMI interested in developing skills for independent living	Support group for people living with SMI developing resources to foster independent living	People living with SMI in the same region advocating for increased housing options for independent living
Work Participation		
Older worker with difficulty performing some work tasks	Group of older workers in a factory advocating for modification of equipment to address discomfort when operating the same set of machines	Older workers in a national corporation advocating for company-wide wellness support programs

Note. IDD = intellectual and developmental disabilities; SMI = serious mental illness.

Table 2. Occupations

Occupations are "the everyday activities that people do as individuals, in families, and with communities to occupy time and bring meaning and purpose to life. Occupations include things people need to, want to and are expected to do" (World Federation of Occupational Therapists, 2012a, para. 2). Occupations are categorized as activities of daily living, instrumental activities of daily living, health management, rest and sleep, education, work, play, leisure, and social participation.

Occupation	Description
Activities of Daily Living (ADLs)—Activities oriented toward taking care of one's own body and completed on a routine basis (adapted from Rogers & Holm, 1994).	
Bathing, showering	Obtaining and using supplies; soaping, rinsing, and drying body parts; maintaining bathing position; transferring to and from bathing positions
Toileting and toilet hygiene	Obtaining and using toileting supplies, managing clothing, maintaining toileting position, transferring to and from toileting position, cleaning body, caring for menstrual and continence needs (including catheter, colostomy, and suppository management), maintaining intentional control of bowel movements and urination and, if necessary, using equipment or agents for bladder control (Uniform Data System for Medical Rehabilitation, 1996, pp. III-20, III-24)
Dressing	Selecting clothing and accessories with consideration of time of day, weather, and desired presentation; obtaining clothing from storage area; dressing and undressing in a sequential fashion; fastening and adjusting clothing and shoes; applying and removing personal devices, prosthetic devices, or splints
Eating and swallowing	Keeping and manipulating food or fluid in the mouth, swallowing it (i.e., moving it from the mouth to the stomach)
Feeding	Setting up, arranging, and bringing food or fluid from the vessel to the mouth (includes self-feeding and feeding others)
Functional mobility	Moving from one position or place to another (during performance of everyday activities), such as in-bed mobility, wheelchair mobility, and transfers (e.g., wheelchair, bed, car, shower, tub, toilet, chair, floor); includes functional ambulation and transportation of objects
Personal hygiene and grooming	Obtaining and using supplies; removing body hair (e.g., using a razor or tweezers); 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; removing, cleaning, and reinserting dental orthotics and prosthetics
Sexual activity	Engaging in the broad possibilities for sexual expression and experiences with self or others (e.g., hugging, kissing, foreplay, masturbation, oral sex, intercourse)
Instrumental Activities of Daily Living (IADLs)—Activities to support daily life within the home and community.	
Care of others (including selection and supervision of caregivers)	Providing care for others, arranging or supervising formal care (by paid caregivers) or informal care (by family or friends) for others

(Continued)

Table 2. Occupations *(cont'd)*

Occupation	Description
Care of pets and animals	Providing care for pets and service animals, arranging or supervising care for pets and service animals
Child rearing	Providing care and supervision to support the developmental and physiological needs of a child
Communication management	Sending, receiving, and interpreting information using systems and equipment such as writing tools, telephones (including smartphones), keyboards, audiovisual recorders, computers or tablets, communication boards, call lights, emergency systems, Braille writers, telecommunication devices for deaf people, augmentative communication systems, and personal digital assistants
Driving and community mobility	Planning and moving around in the community using public or private transportation, such as driving, walking, bicycling, or accessing and riding in buses, taxi cabs, ride shares, or other transportation systems
Financial management	Using fiscal resources, including financial transaction methods (e.g., credit card, digital banking); planning and using finances with long-term and short-term goals
Home establishment and management	Obtaining and maintaining personal and household possessions and environments (e.g., home, yard, garden, houseplants, appliances, vehicles), including maintaining and repairing personal possessions (e.g., clothing, household items) and knowing how to seek help or whom to contact
Meal preparation and cleanup	Planning, preparing, and serving meals and cleaning up food and tools (e.g., utensils, pots, plates) after meals
Religious and spiritual expression	Engaging in religious or spiritual activities, organizations, and practices for self-fulfillment; finding meaning or religious or spiritual value; establishing connection with a divine power, such as is involved in attending a church, temple, mosque, or synagogue; praying or chanting for a religious purpose; engaging in spiritual contemplation (World Health Organization, 2008); may also include giving back to others, contributing to society or a cause, and contributing to a greater purpose
Safety and emergency maintenance	Evaluating situations in advance for potential safety risks; recognizing sudden, unexpected hazardous situations and initiating emergency action; reducing potential threats to health and safety, including ensuring safety when entering and exiting the home, identifying emergency contact numbers, and replacing items such as batteries in smoke alarms and light bulbs
Shopping	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

(Continued)

Table 2. Occupations *(cont'd)*

Occupation	Description
Health Management—Activities 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.	
Social and emotional health promotion and maintenance	Identifying personal strengths and assets, managing emotions, expressing needs effectively, seeking occupations and social engagement to support health and wellness, developing self-identity, making choices to improve quality of life in participation
Symptom and condition management	Managing physical and mental health needs, including using coping strategies for illness, trauma history, or societal stigma; managing pain; managing chronic disease; recognizing symptom changes and fluctuations; developing and using strategies for managing and regulating emotions; planning time and establishing behavioral patterns for restorative activities (e.g., meditation); using community and social supports; navigating and accessing the health care system
Communication with the health care system	Expressing and receiving verbal, written, and digital communication with health care and insurance providers, including understanding and advocating for self or others
Medication management	Communicating with the physician about prescriptions, filling prescriptions at the pharmacy, interpreting medication instructions, taking medications on a routine basis, refilling prescriptions in a timely manner (American Occupational Therapy Association, 2017c; Schwartz & Smith, 2017)
Physical activity	Completing cardiovascular exercise, strength training, and balance training to improve or maintain health and decrease risk of health episodes, such as by incorporating walks into daily routine
Nutrition management	Implementing and adhering to nutrition and hydration recommendations from the medical team, preparing meals to support health goals, participating in health-promoting diet routines
Personal care device management	Procuring, using, cleaning, and maintaining personal care devices, including hearing aids, contact lenses, glasses, orthotics, prosthetics, adaptive equipment, pessaries, glucometers, and contraceptive and sexual devices
Rest and Sleep—Activities related to obtaining restorative rest and sleep to support healthy, active engagement in other occupations.	
Rest	Identifying the need to relax and engaging in quiet and effortless actions that interrupt physical and mental activity (Nurit & Michal, 2003, p. 227); reducing involvement in taxing physical, mental, or social activities, resulting in a relaxed state; engaging in relaxation or other endeavors that restore energy and calm and renew interest in engagement
Sleep preparation	Engaging in routines that prepare the self for a comfortable rest, such as grooming and undressing, reading or listening to music, saying goodnight to others, and engaging in meditation or prayers; determining the time of day and length of time

(Continued)

Table 2. Occupations *(cont'd)*

Occupation	Description
	desired for sleeping and the time needed to wake; establishing sleep patterns that support growth and health (patterns are often personally and culturally determined); preparing the physical environment for periods of sleep, such as making the bed or space on which to sleep, ensuring warmth or coolness and protection, setting an alarm clock, securing the home (e.g., by locking doors or closing windows or curtains), setting up sleep-supporting equipment (e.g., CPAP machine), and turning off electronics and lights
Sleep participation	Taking care of personal needs for sleep, such as ceasing activities to ensure onset of sleep, napping, and dreaming; sustaining a sleep state without disruption; meeting nighttime toileting and hydration needs, including negotiating the needs of and interacting with others (e.g., children, partner) within the social environment, such as providing nighttime caregiving (e.g., breastfeeding) and monitoring comfort and safety of others who are sleeping
Education—Activities needed for learning and participating in the educational environment.	
Formal educational participation	Participating in academic (e.g., math, reading, degree coursework), nonacademic (e.g., recess, lunchroom, hallway), extracurricular (e.g., sports, band, cheerleading, dances), technological (e.g., online assignment completion, distance learning), and vocational (including prevocational) educational activities
Informal personal educational needs or interests exploration (beyond formal education)	Identifying topics and methods for obtaining topic-related information or skills
Informal educational participation	Participating in classes, programs, and activities that provide instruction or training outside of a structured curriculum in identified areas of interest
Work—Labor or exertion related to the development, production, delivery, or management of objects or services; benefits may be financial or nonfinancial (e.g., social connectedness, contributions to society, structure and routine to daily life; Christiansen & Townsend, 2010; Dorsey et al., 2019).	
Employment interests and pursuits	Identifying and selecting work opportunities consistent with personal assets, limitations, goals, and interests (adapted from Mosey, 1996, p. 342)
Employment seeking and acquisition	Advocating for oneself; completing, submitting, and reviewing application materials; preparing for interviews; participating in interviews and following up afterward; discussing job benefits; finalizing negotiations
Job performance and maintenance	Creating, producing, and distributing products and services; maintaining required work skills and patterns; managing time use; managing relationships with coworkers, managers, and customers; following and providing leadership and supervision; initiating, sustaining, and completing work; complying with work norms and procedures; seeking and responding to feedback on performance

(Continued)

Table 2. Occupations *(cont'd)*

Occupation	Description
Retirement preparation and adjustment	Determining aptitudes, developing interests and skills, selecting vocational pursuits, securing required resources, adjusting lifestyle in the absence of the worker role
Volunteer exploration	Identifying and learning about community causes, organizations, and opportunities for unpaid work consistent with personal skills, interests, location, and time available
Volunteer participation	Performing unpaid work activities for the benefit of selected people, causes, or organizations
Play—Activities 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 (Lynch et al., 2016).	
Play exploration	Identifying play activities, including exploration play, practice play, pretend play, games with rules, constructive play, and symbolic play (adapted from Bergen, 1988, pp. 64–65)
Play participation	Participating in play; maintaining a balance of play with other occupations; obtaining, using, and maintaining toys, equipment, and supplies
Leisure—"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" (Parham & Fazio, 1997, p. 250).	
Leisure exploration	Identifying interests, skills, opportunities, and leisure activities
Leisure participation	Planning and participating in leisure activities; maintaining a balance of leisure activities with other occupations; obtaining, using, and maintaining equipment and supplies
Social Participation—Activities that involve social interaction with others, including family, friends, peers, and community members, and that support social interdependence (Bedell, 2012; Khetani & Coster, 2019; Magasi & Hammel, 2004).	
Community participation	Engaging in activities that result in successful interaction at the community level (e.g., neighborhood, organization, workplace, school, digital social network, religious or spiritual group)
Family participation	Engaging in activities that result in "interaction in specific required and/or desired familial roles" (Mosey, 1996, p. 340)
Friendships	Engaging in activities that support "a relationship between two people based on mutual liking in which partners provide support to each other in times of need" (Hall, 2017, para. 2)
Intimate partner relationships	Engaging in activities to initiate and maintain a close relationship, including giving and receiving affection and interacting in desired roles; intimate partners may or may not engage in sexual activity
Peer group participation	Engaging in activities with others who have similar interests, age, background, or social status

Note. CPAP = continuous positive airway pressure.

Table 3. Examples of Occupations for Persons, Groups, and Populations
Persons engage in occupations, and groups engage in shared occupations; populations as a whole do not engage in shared occupations, which happen at the person or group level. Occupational therapy practitioners provide interventions for persons, groups, and populations.

Occupation Category	Client Type	Example
Activities of daily living	Person	Older adult completing bathing with assistance from an adult child
	Group	Students eating lunch during a lunch break
Instrumental activities of daily living	Person	Parent using a phone app to pay a babysitter electronically
	Group	Club members using public transportation to arrive at a musical performance
Health management	Person	Patient scheduling an appointment with a specialist after referral by the primary care doctor
	Group	Parent association sharing preparation of healthy foods to serve at a school-sponsored festival
Rest and sleep	Person	Person turning off lights and adjusting the room temperature to 68° before sleep
	Group	Children engaging in nap time at a day care center
Education	Person	College student taking an African-American history class online
	Group	Students working on a collaborative science project on robotics
Work	Person	Electrician turning off power before working on a power line
	Group	Peers volunteering for a day of action at an animal shelter
Play	Person	Child playing superhero dress up
	Group	Class playing freeze tag during recess
Leisure	Person	Family member knitting a sweater for a new baby
	Group	Friends meeting for a craft circle
Social participation	Person	New mother going to lunch with friends
	Group	Older adults gathering at a community center to wrap holiday presents for charity distribution

Table 4. Context: Environmental Factors

Context is the broad construct that encompasses environmental factors and personal factors. *Environmental factors* are aspects of the physical, social, and attitudinal surroundings in which people live and conduct their lives.

Environmental Factor	Components	Examples
Natural environment and human-made changes to the environment: Animate and inanimate elements of the natural or physical environment and components of that environment that have been modified by people, as well as characteristics of human populations within the environment	Physical geography	• Raised flower beds in a backyard • Local stream cleanup by Boy Scouts during a community service day project • Highway expansion cutting through an established neighborhood
	Population: Groups of people living in a given environment who share the same pattern of environmental adaptation	• Universal access playground where children with mobility impairment can play • Hearing loop installed in a synagogue for congregation members with hearing aids • Tree-shaded, solid-surface walking path enjoyed by older adults in a senior living community
	Flora (plants) and fauna (animals)	• Nonshedding service dog • Family-owned herd of cattle • Community garden
	Climate: Meteorological features and events, such as weather	• Sunny day requiring use of sunglasses • Rain shower prompting a crew of road workers to don rain gear • Unusually high temperatures turning a community ice skating pond to slush
	Natural events: Regular or irregular geographic and atmospheric changes that cause disruption in the physical environment	• Barometric pressure causing a headache • Flood of a local creek damaging neighborhood homes • Hurricane devastating a low-lying region
	Human-caused events: Alterations or disturbances in the natural environment caused by humans that result in the disruption of day-to-day life	• High air pollution forcing a person with lung disease to stay indoors • Accessible dock at a local river park demolished to make way for a new bridge construction project • Derailment of a train loaded with highly combustible chemicals leading to the emergency total evacuation of a small town
	Light: Light intensity and quality	• Darkness requiring use of a reading lamp • Office with ample natural light • Street lamps
	Time-related changes: Natural, regularly occurring, or predictable change; rhythm and duration of activity; time of day, week, month, season, or year; day–night cycles; lunar cycles	• Jet lag • Quitting time at the end of a work shift • Summer solstice

(Continued)

Table 4. Context: Environmental Factors *(cont'd)*

Environmental Factor	Components	Examples
	Sound and vibration: Heard or felt phenomena that may provide useful or distracting information about the world	• Vibration of a cell phone indicating a text message • Bell signaling the start of the school day • Outdoor emergency warning system on a college campus
	Air quality: Characteristics of the atmosphere (outside buildings) or enclosed areas of air (inside buildings)	• Heavy perfume use by a family member causing an asthmatic reaction • Smoking area outside an office building • High incidence of respiratory diseases near an industrial district
Products and technology: Natural or human-made products or systems of products, equipment, and technology that are gathered, created, produced, or manufactured	Food, drugs, and other products or substances for personal consumption	• Preferred snack • Injectable hormones for a transgender man • Grade-school cafeteria lunch
	General products and technology for personal use in daily living (including assistive technology and products)	• Toothbrush • Household refrigerator • Shower in a fitness or exercise facility
	Personal indoor and outdoor mobility and transportation equipment used by people in activities requiring movement inside and outside of buildings	• Four-wheeled walker • Family car • Elevator in a multistory apartment building
	Communication: Activities involving sending and receiving information	• Hearing aid • Text chain via personal cell phones • Use of emergency response system to warn region of impending dangerous storms
	Education: Processes and methods for acquiring knowledge, expertise, or skill	• Textbook • Online course • Curriculum for workplace sexual harassment program
	Employment: Paid work activities	• Home office for remote work • Assembly factory • Internet connection for health care workers to access electronic medical records
	Cultural, recreational, and sporting activities	• Gaming console • Instruments for a university marching band • Soccer stadium
	Practice of religion and spirituality	• Prayer rug • Temple • Sunday church service television broadcast
	Indoor and outdoor human-made environments that are planned, designed, and constructed for public and private use	• Home bathroom with grab bars and raised toilet seat • Accessible playground at a city park • Zero-grade entry to a shopping mall

(Continued)

Table 4. Context: Environmental Factors *(cont'd)*

Environmental Factor	Components	Examples
	Assets for economic exchange, such as money, goods, property, and other valuables that an individual owns or has rights to use	• Pocket change • Household budget • Condominium association tax bill
	Virtual environments occurring in simulated, real-time, and near-time situations, absent of physical contact	• Personal cell phone • Synchronous video meeting of coworkers in distant locations • Open-source video gaming community
Support and relationships: People or animals that provide practical physical or emotional support, nurturing, protection, assistance, and relationships to other persons in the home, workplace, or school or at play or in other aspects of their daily activities	Immediate and extended family	• Spouses, partners, parents, siblings, foster parents, and adoptive grandparents • Biological families and found or constructed families
	Friends, acquaintances, peers, colleagues, neighbors, and community members	• Trusted best friend • Coworkers • Helpful next-door neighbor • Substance abuse recovery support group sponsor
	People in positions of authority and those in subordinate positions	• Teacher who offers extra tutoring • Legal guardian for a parentless minor • Female religious reporting to a sister superior • New employee being oriented to the job tasks by an assigned mentor
	Personal care providers and personal assistants providing support to individuals	Health care professionals and other professionals serving a community
	Domesticated animals	• Therapy dog program in a senior living community • Horse kept to draw a buggy for an Amish family's transportation
Attitudes: Observable evidence of customs, practices, ideologies, values, norms, factual beliefs, and religious beliefs held by people other than the client	Individual attitudes of immediate and extended family, friends and acquaintances, peers and colleagues, neighbors and community members, people in positions of authority and subordinate positions, personal care providers and personal assistants, strangers, and health care and other professionals	• Shared grief over the untimely death of a sibling • Automatic trust from a patient who knows one's father • Reliance among members of a faith community
	Societal attitudes, including discriminatory practices	• Failure to acknowledge a young person who wants to vote for the first time • Racial discrimination in job hiring processes
	Social norms, practices, and ideologies that marginalize specific populations	No time off work allowed to observe a religion's holy day
Services, systems, and policies: Benefits, structured programs, and regulations for operations, provided by institutions in	Services designed to meet the needs of persons, groups, and populations	• Economic services, including Social Security income and public assistance

(Continued)

Table 4. Context: Environmental Factors *(cont'd)*

Environmental Factor	Components	Examples
various sectors of society, designed to meet the needs of persons, groups, and populations		• Health services for preventing and treating health problems, providing medical rehabilitation, and promoting healthy lifestyles
	Systems established by governments at the local, regional, national, and international levels or by other recognized authorities	• Public utilities (e.g., water, electricity, sanitation) • Communications (transmission and exchange of information) • Transportation systems • Political systems related to voting, elections, and governance
	Policies constituted by rules, regulations, conventions, and standards established by governments at the local, regional, national, and international levels or by other recognized authorities	• Architecture, construction, open space use, and housing policies • Civil protection and legal services • Labor and employment policies related to finding suitable work, looking for different work, or seeking promotion

Table 5. Context: Personal Factors

Context is the broad construct that encompasses environmental factors and personal factors. *Personal factors* are the particular background of a person's life and living and consist of the unique features of the person that are not part of a health condition or health state.

Personal Factor	Person A	Person B
Age (chronological)	• 48 years old	• 14 years old
Sexual orientation	• Attracted to men	• Attracted to all genders
Gender identity	• Female	• Male
Race and ethnicity	• Black French Caribbean	• Southeast Asian Hmong
Cultural identification and cultural attitudes	• Urban Black • Feminist • Caribbean island identification	• Traditional clan structure • Elders who are decision makers for community
Social background, social status, and socioeconomic status	• Urban, upscale neighborhood • Friends in the professional workforce • Income that allows for luxury	• Family owns small home • Father with a stable job in light manufacturing • Mother who is a child care provider for neighborhood children
Upbringing and life experiences	• No siblings • Raised in household with grandmother as caregiver • Moved from California to Boston while an adolescent	• Traditional • Born in a refugee camp before parents emigrated • Youngest of five siblings • Lives in a small city in the Upper Midwest
Habits and past and current behavioral patterns	• Coffee before anything else • Meticulous about dress	• Organized and attentive to family • Never misses a family meal
Individual psychological assets, including temperament, character traits, and coping styles, for handling responsibilities, stress, crises, and other psychological demands (e.g., extroversion, agreeableness, conscientiousness, psychic stability, openness to experience, optimism, confidence)	• Anxious when not working • Extroverted • High level of confidence • Readily adapts approach to and interactions with those who are culturally different	• Known for being calm • Not outgoing but friendly to all • Does not speak up or complain at school during conflict
Education	• Master's degree in political science • Law degree	• High school freshman • Advanced skills in the sciences
Profession and professional identity	• Public interest lawyer	• Public high school student
Lifestyle	• High-rise apartment • Likes urban nightlife and casual dating • Works long hours	• Engaged in clan and community • Four older siblings who live nearby
Other health conditions and fitness	• Treated for anorexia nervosa while an adolescent • Occasional runner	• Wears eyeglasses for astigmatism • Sedentary at home except for assigned chores

Table 6. Performance Patterns

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. These patterns are influenced by context and time use and can support or hinder occupational performance.

Category	Description	Examples
Person		
Habits	"Specific, automatic behaviors performed repeatedly, relatively automatically, and with little variation" (Matuska & Barrett, 2019, p. 214). Habits can be healthy or unhealthy, efficient or inefficient, and supportive or harmful (Dunn, 2000).	• Automatically puts car keys in the same place • Spontaneously looks both ways before crossing the street • Always turns off the stove burner before removing a cooking pot • Activates the alarm system before leaving the home • Always checks smartphone for emails or text messages on waking • Snacks when watching television
Routines	Patterns of behavior that are observable, regular, and 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 (Fiese, 2007; Segal, 2004).	• Follows a morning sequence to complete toileting, bathing, hygiene, and dressing • Follows the sequence of steps involved in meal preparation • Manages morning routine to drop children off at school and arrive at work on time
Roles	Aspects of identity shaped by culture and context that may be further conceptualized and defined by the client and the activities and occupations one engages in.	• Sibling in a family with three children • Retired military personnel • Volunteer at a local park district • Mother of an adolescent with developmental disabilities • Student with a learning disability studying computer technology • Corporate executive returning to part-time work after a stroke
Rituals	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 consist of a collection of events (Fiese, 2007; Fiese et al., 2002; Segal, 2004).	• Shares a highlight from the day during evening meals with family • Kisses a sacred book before opening the pages to read • Recites the Pledge of Allegiance before the start of the school day
Group and Population		
Routines	Patterns of behavior that are observable, regular, and repetitive and that provide structure for daily life. They can be satisfying, promoting, or damaging. Time provides an organizational structure or rhythm for routines (Larson & Zemke, 2003). Routines are embedded in cultural and ecological contexts (Segal, 2004).	*Group* • Workers attending weekly staff meetings • Students turning in homework assignments as they enter the classroom • Exercise class attendees setting up their mats and towels before class *Population* • Parents of young children following health practices such as yearly checkups and scheduled immunizations

(Continued)

Table 6. Performance Patterns *(cont'd)*

Category	Description	Examples
		• Corporations following business practices such as providing services for disadvantaged populations (e.g., loans to underrepresented groups) • School districts following legislative procedures such as those associated with the Individuals With Disabilities Education Improvement Act of 2004 (Pub. L. 108-446) or Medicare
Roles	Sets of behaviors by the group or population expected by society and shaped by culture and context that may be further conceptualized and defined by the group or population.	*Group* • Nonprofit civic group providing housing for people living with mental illness • Humanitarian group distributing food and clothing donations to refugees • Student organization in a university educating elementary school children about preventing bullying *Population* • Parents providing care for children until they become adults • Grandparents or older community members being consulted before decisions are made
Rituals	Shared social actions with traditional, emotional, purposive, and technological meaning contributing to values and beliefs within the group or population.	*Group* • Employees of a company attending an annual holiday celebration • Members of a community agency hosting a fundraiser every spring *Population* • Citizens of a country suspending work activities in observance of a national holiday

Table 7. Performance Skills for Persons

Performance skills are observable, goal-directed actions that result in a client's quality of performing desired occupations. Skills are supported by the context in which the performance occurs, including environmental and client factors (Fisher & Marterella, 2019). Effective use of motor and process performance skills is demonstrated when the client carries out an activity efficiently, safely, with ease, or without assistance. Effective use of social interaction performance skills is demonstrated when the client completes interactions in a manner that matches the demands of the social situation. Ineffective use of performance skills is demonstrated when the client routinely requires assistance or support to perform activities or engage in social interactions.

The examples in this table are limited to descriptions of the client's ability to use each performance skill in an effective or ineffective manner. A client who demonstrates ineffective use of performance skills may be able to successfully complete the entire occupation with the use of occupational or environmental adaptations. Successful occupational performance by the client may be achieved when such adaptions are used.

Specific Skill Definitions	Examples	
	Effective Performance[a]	Ineffective Performance[b]
Motor Skills—*"Motor skills* are the group of performance skills that represent small, observable actions related to moving oneself or moving and interacting with tangible task objects (e.g., tools, utensils, clothing, food or other supplies, digital devices, plant life) in the context of performing a personally and ecologically relevant daily life task" (Fisher & Marterella, 2019, p. 331).		
Positioning the body	**Washing dishes at the kitchen sink**	
Stabilizes—Moves through task environment and interacts with task objects without momentary propping or loss of balance	Person moves through the kitchen without propping or loss of balance.	Person momentarily props on the counter to stabilize body while standing at the sink and washing dishes.
Aligns—Interacts with task objects without evidence of persistent propping or leaning	Person washes dishes without using the counter for support.	Person persistently leans on the counter, resulting in ineffective performance when washing dishes.
Positions—Positions self an effective distance from task objects and without evidence of awkward arm or body positions	Person places body or wheelchair at an effective distance for washing dishes.	Person positions body or wheelchair too far from the sink, resulting in difficulty reaching for dishes in the sink.
Obtaining and holding objects	**Acquiring a game from a cabinet in preparation for a family activity**	
Reaches—Effectively extends arm and, when appropriate, bends trunk to effectively grasp or place task objects that are out of reach	Person reaches without effort for the game box.	Person reaches with excessive physical effort for the game box.
Bends—Flexes or rotates trunk as appropriate when sitting down or when bending to grasp or place task objects that are out of reach	Person bends without effort when reaching for the game box.	Person demonstrates excessive stiffness when bending to reach for the game box.
Grips—Effectively pinches or grasps task objects such that the objects do not slip (e.g., from between fingers, from between teeth, from between hand and supporting surface)	Person grips the game box and game pieces, and they do not slip from the hand.	Person grips the game box ineffectively, and the box slips from the hand so that game pieces spill.
Manipulates—Uses dexterous finger movements, without evidence of fumbling, when manipulating task objects	Person readily manipulates the game pieces with fingers while setting up and playing the game.	Person fumbles the game pieces so that some pieces fall off the game board.

(Continued)

Table 7. Performance Skills for Persons *(cont'd)*

Specific Skill Definitions	Examples	
	Effective Performance[a]	Ineffective Performance[b]
Performance Skills: Motor Skills *(cont'd)*		
Moving self and objects	**Completing janitorial tasks at a factory site**	
Coordinates—Uses two or more body parts together to manipulate and hold task objects without evidence of fumbling or task objects slipping from the grasp	Person uses both hands to shuffle the game cards without fumbling them, and the cards do not slip from the hands.	Person uses both hands to shuffle the cards but fumbles the deck, and the cards slip out of the hands.
Moves—Effectively pushes or pulls task objects along a supporting surface, pulls to open or pushes to close doors and drawers, or pushes on wheels to propel a wheelchair	Person moves the broom easily, pushing and pulling it across the floor.	Person demonstrates excessive effort to move the broom across the floor when sweeping.
Lifts—Effectively raises or lifts task objects without evidence of excessive physical effort	Person easily lifts cleaning supplies out of the cart.	Person needs to use both hands to lift small lightweight containers of cleaning supplies out of the cart.
Walks—During task performance, ambulates on level surfaces without shuffling feet, becoming unstable, propping, or using assistive devices	Person walks steadily through the factory.	Person demonstrates unstable walking while performing janitorial duties or walks while supporting self on the cart.
Transports—Carries task objects from one place to another while walking or moving in a wheelchair	Person carries cleaning supplies from one factory location to another, either by walking or using a wheelchair, without effort.	Person is unstable when transporting cleaning supplies throughout the factory.
Calibrates—Uses movements of appropriate force, speed, or extent when interacting with task objects (e.g., does not crush task objects, pushes a door with enough force to close it without a bang)	Person uses an appropriate amount of force to squeeze liquid soap onto a cleaning cloth.	Person applies too little force to squeeze soap out of the container onto the cleaning cloth.
Flows—Uses smooth and fluid arm and wrist movements when interacting with task objects	Person demonstrates fluid arm and wrist movements when wiping tables.	Person demonstrates stiff and jerky arm and wrist movements when wiping tables.
Sustaining performance	**Bathing an older parent as caregiver**	
Endures—Persists and completes the task without demonstrating physical fatigue, pausing to rest, or stopping to catch breath	Person completes bathing of parent without evidence of physical fatigue.	Person stops to rest, interrupting the task of bathing the parent.
Paces—Maintains a consistent and effective rate or tempo of performance throughout the entire task performance	Person uses an appropriate tempo when bathing the parent.	Person sometimes rushes or delays actions when bathing the parent.
Process Skills—*"Process skills* are the group of performance skills that represent small, observable actions related to selecting, interacting with, and using tangible task objects (e.g., tools, utensils, clothing, food or other supplies, digital devices, plant life); carrying out individual actions and steps; and preventing problems of occupational performance from occurring or reoccurring in the context of performing a personally and ecologically relevant daily life task" (Fisher & Marterella, 2019, pp. 336–337).		

(Continued)

Table 7. Performance Skills for Persons *(cont'd)*

Specific Skill Definitions	Examples	
	Effective Performance[a]	Ineffective Performance[b]
Performance Skills: Process Skills *(cont'd)*		
Sustaining performance	**Writing sentences for a school assignment**	
Paces—Maintains a consistent and effective rate or tempo of performance throughout the entire task performance	Person uses a consistent and even tempo when writing sentences.	Person rushes writing sentences, resulting in incorrectly formed letters or misspelled words.
Attends—Does not look away from task performance, maintaining the ongoing task progression	Person maintains gaze on the assignment and continues writing sentences without pause.	Person looks toward another student and pauses when writing sentences.
Heeds—Carries out and completes the task originally agreed on or specified by another person	Person completes the assignment, writing the number of sentences required.	Person writes fewer sentences than required, not completing the assignment.
Applying knowledge	**Taking prescribed medications**	
Chooses—Selects necessary and appropriate type and number of objects for the task, including the task objects that one chooses or is directed to use (e.g., by a teacher)	Person chooses specified medicine bottles appropriate for the specific timed dose.	Person chooses an incorrect medicine bottle for the specific timed dose.
Uses—Applies task objects as they are intended (e.g., using a pencil sharpener to sharpen a pencil but not a crayon) and in a hygienic fashion	Person uses a medicine spoon to take a dose of liquid medicine.	Person uses a tablespoon to take a 1-teaspoon dose of liquid medicine.
Handles—Supports or stabilizes task objects appropriately, protecting them from being damaged, slipping, moving, or falling	Person supports the medicine bottle, keeping it upright without the bottle tipping or falling.	Person allows the medicine bottle to tip, and pills spill from the bottle.
Inquires—(1) Seeks needed verbal or written information by asking questions or reading directions or labels and (2) does not ask for information when fully oriented to the task and environment and recently aware of the answer	Person reads the label on the medicine bottle before taking the medication.	Person asks the care provider what dose to take having already read the dose on the label.
Organizing timing	**Using an ATM to get cash to pay a babysitter**	
Initiates—Starts or begins the next task action or task step without any hesitation	Person begins each step of ATM use without hesitation.	Person pauses before entering the PIN into the ATM.
Continues—Performs single actions or steps without any interruptions so that once an action or task step is initiated, performance continues without pauses or delays until the action or step is completed	Person completes each step of ATM use without delays.	Person starts to enter the PIN, pauses, and then continues entering the PIN.

(Continued)

Table 7. Performance Skills for Persons *(cont'd)*

Specific Skill Definitions	Examples	
	Effective Performance[a]	Ineffective Performance[b]
Performance Skills: Process Skills *(cont'd)*		
Sequences—Performs steps in an effective or logical order and with an absence of randomness in the ordering or inappropriate repetition of steps	Person completes each step of ATM use in logical order.	Person attempts to enter the PIN before inserting the bank card into the card reader.
Terminates—Brings to completion single actions or single steps without inappropriate persistence or premature cessation	Person completes each step of ATM use in the appropriate length of time.	Person persists in entering numbers after completing the four-digit PIN.
Organizing space and objects	**Managing clerical duties for a large company**	
Searches/locates—Looks for and locates task objects in a logical manner	Person readily locates needed office supplies from shelves and drawers.	Person searches a shelf a second time to locate needed clerical supplies.
Gathers—Collects related task objects into the same work space and regathers task objects that have spilled, fallen, or been misplaced	Person gathers required clerical tools and supplies in the assigned work space.	Person places required paper and pen in different work spaces and then must move them to the same work space.
Organizes—Logically positions or spatially arranges task objects in an orderly fashion within a single work space or between multiple appropriate work spaces such that the work space is not too spread out or too crowded	Person organizes required clerical tools and supplies within the work space so all are within reach.	Person places books on top of papers, resulting in a crowded work space.
Restores—Puts away task objects in appropriate places and ensures that the immediate work space is restored to its original condition	Person returns clerical tools and supplies to their original storage location.	Person puts pens and extra paper in a different storage closet from where originally found.
Navigates—Moves body or wheelchair without bumping into obstacles when moving through the task environment or interacting with task objects	Person moves through the office space without bumping into office furniture or machines.	Person bumps hand into the edge of the desk when reaching for a pen from the pen holder.
Adapting performance	**Preparing a green salad for a family meal**	
Notices/responds—Responds appropriately to (1) nonverbal task-related cues (e.g., heat, movement), (2) the spatial arrangement and alignment of task objects to one another, and (3) cupboard doors or drawers that have been left open during task performance	Person notices the carrot rolling off the cutting board and catches it before it rolls onto the floor.	Person delays noticing a rolling carrot, and it rolls off the cutting board onto the floor.
Adjusts—Overcomes problems with ongoing task performance effectively by (1) going to a new workspace; (2) moving task objects out of the current workspace; or (3) adjusting knobs, dials, switches, or water taps	Person readily adjusts the flow of water from the tap when washing vegetables.	Person delays turning off the water tap after washing the vegetables.

(Continued)

Table 7. Performance Skills for Persons *(cont'd)*

Specific Skill Definitions	Examples	
	Effective Performance[a]	**Ineffective Performance[b]**
Performance Skills: Process Skills *(cont'd)*		
Accommodates—Prevents ineffective performance of all other motor and process skills and asks for assistance only when appropriate or needed	Person prevents problems from occurring during the salad preparation.	Person does not prevent problems from occurring, such as carrots rolling off the cutting board and onto the floor.
Benefits—Prevents ineffective performance of all other motor and process skills from recurring or persisting	Person prevents problems from continuing or reoccurring during the salad preparation.	Person retrieves the carrot from the floor and puts it back on the cutting board, and the carrot rolls off the board again.
Social Interaction Skills—*"Social interaction skills* are the group of performance skills that represent small, observable actions related to communicating and interacting with others in the context of engaging in a personally and ecologically relevant daily life task performance that involves social interaction with others" (Fisher & Marterella, 2019, p. 342).		
Initiating and terminating social interaction	**Participating in a community support group**	
Approaches/starts—Approaches or initiates interaction with the social partner in a manner that is socially appropriate	Person politely begins interactions with support group members.	Person begins interactions with support group members by yelling at them from across the room.
Concludes/disengages—Effectively terminates the conversation or social interaction, brings to closure the topic under discussion, and disengages or says goodbye	Person politely ends a conversation with a support group member.	Person abruptly ends interaction with the support group by walking out of the room.
Producing social interaction	**Child playing in the sandbox with others to build roads for cars and trucks**	
Produces speech—Produces spoken, signed, or augmentative (i.e., computer-generated) messages that are audible and clearly articulated	Person produces clear verbal, signed, or augmentative messages to communicate with other children playing in the sandbox.	Person mumbles when interacting with other children playing in the sandbox, and the other children do not understand the message.
Gesticulates—Uses socially appropriate gestures to communicate or support a message	Person gestures by waving or pointing while communicating with other children playing in the sandbox.	Person uses aggressive gestures when interacting with other children playing in the sandbox.
Speaks fluently—Speaks in a fluent and continuous manner, with an even pace (not too fast, not too slow) and without pauses or delays, while sending a message	Person speaks, without pausing, stuttering, or hesitating, when engaging with other children playing in the sandbox.	Person hesitates or pauses when talking with other children playing in the sandbox.
Physically supporting social interaction	**Older adult in a senior residence talking with other residents during a shared mealtime**	
Turns toward—Actively positions or turns body and face toward the social partner or the person who is speaking	Person turns body and face toward other residents while interacting during the meal.	Person turns face away from other residents while interacting during the meal.
Looks—Makes eye contact with the social partner	Person makes eye contact with other residents while interacting during the meal.	Person looks down at own plate while interacting during the meal.

(Continued)

Table 7. Performance Skills for Persons *(cont'd)*

Specific Skill Definitions	Examples	
	Effective Performance[a]	Ineffective Performance[b]
Performance Skills: Social Interaction Skills *(cont'd)*		
Places self—Positions self at an appropriate distance from the social partner	Person sits an appropriate distance from other residents at the table.	Person sits too far from other residents, interfering with interactions.
Touches—Responds to and uses touch or bodily contact with the social partner in a socially appropriate manner	Person touches other residents appropriately during the meal.	Person reaches out, grasps another resident's shirt, and abruptly pulls on it during the meal.
Regulates—Does not demonstrate irrelevant, repetitive, or impulsive behaviors during social interaction	Person avoids demonstrating irrelevant, repetitive, or impulsive behaviors while interacting during the meal.	Person repeatedly taps the fork on the plate while interacting during the meal.
Shaping content of social interaction	**Serving ice cream to customers in an ice cream shop**	
Questions—Requests relevant facts and information and asks questions that support the intended purpose of the social interaction	Person asks customers for their choice of ice cream flavor.	Person asks customers for their choice of ice cream flavor and then repeats the question after they respond.
Replies—Keeps conversation going by replying appropriately to suggestions, opinions, questions, and comments	Person readily replies with relevant answers to customers' questions about ice cream products.	Person delays in replying to customers' questions or provides irrelevant information.
Discloses—Reveals opinions, feelings, and private information about self or others in a socially appropriate manner	Person discloses no personal information about self or others to customers.	Person reveals socially inappropriate details about own family.
Expresses emotions—Displays affect and emotions in a socially appropriate manner	Person displays socially appropriate emotions when sending messages to customers.	Person uses a sarcastic tone of voice when describing ice cream flavor options.
Disagrees—Expresses differences of opinion in a socially appropriate manner	Person expresses a difference of opinion about ice cream products in a polite way.	Person becomes argumentative when a customer requests a flavor that is not available.
Thanks—Uses appropriate words and gestures to acknowledge receipt of services, gifts, or compliments	Person thanks the customers for purchasing ice cream.	Person fails to say thank you after customers purchase ice cream.
Maintaining flow of social interaction	**Sharing suggestions with others in a support group for persons experiencing mental health challenges**	
Transitions—Handles transitions in the conversation or changes the topic without disrupting the ongoing conversation	Person offers comments or suggestions that relate to the topic of mental health challenges, smoothly moving the topic in a relevant direction.	Person abruptly changes the topic of conversation to planning social activities during a discussion of mental health challenges.
Times response—Replies to social messages without delay or hesitation and without interrupting the social partner	Person replies to another group member's question about community supports for mental health challenges after briefly considering how best to respond.	Person replies to another group member's question about community supports for mental health challenges before the other person finishes asking the question.

(Continued)

Table 7. Performance Skills for Persons *(cont'd)*

Specific Skill Definitions	Examples	
	Effective Performance[a]	Ineffective Performance[b]
Performance Skills: Social Interaction Skills *(cont'd)*		
Times duration—Speaks for a reasonable length of time given the complexity of the message	Person sends messages about mental health challenges of an appropriate length.	Person sends prolonged messages containing extraneous details.
Takes turns—Speaks in turn and gives the social partner the freedom to take their turn	Person engages in back-and-forth conversation with others in the group.	Person does not respond to comments from others during the group discussion.
Verbally supporting social interaction	**Visiting a Social Security office to obtain information relative to potential benefits**	
Matches language—Uses a tone of voice, dialect, and level of language that are socially appropriate and matched to the social partner's abilities and level of understanding	Person uses a tone of voice and vocabulary that match those of the Social Security agent.	Person uses a loud voice and slang when interacting with the Social Security agent.
Clarifies—Responds to gestures or verbal messages from the social partner signaling that the social partner does not comprehend or understand a message and ensures that the social partner is following the conversation	Person rephrases the initial question when the Social Security agent requests clarification.	Person asks an unrelated question when the Social Security agent requests clarification of the initial question.
Acknowledges and encourages—Acknowledges receipt of messages, encourages the social partner to continue the social interaction, and encourages all social partners to participate in the interaction	Person nods to indicate understanding of the information shared by the Social Security agent.	Person does not nod or use words to acknowledge receipt of messages sent by the Social Security agent.
Empathizes—Expresses a supportive attitude toward the social partner by agreeing with, empathizing with, or expressing understanding of the social partner's feelings and experiences	Person shows empathy when the Social Security agent expresses frustration with the slow computer system.	Person shows impatience when the Social Security agent expresses frustration with the slow computer system.
Adapting social interaction	**Deciding which restaurant to go to with a group of friends**	
Heeds—Uses goal-directed social interactions focused on carrying out and completing the intended purpose of the social interaction	Person maintains focus on deciding which restaurant to go to.	Person makes comments unrelated to choosing a restaurant, disrupting the group decision making.
Accommodates—Prevents ineffective or socially inappropriate social interaction	Person avoids making ineffective responses to others about restaurant choice.	Person asks a question that is irrelevant to choosing a restaurant.
Benefits—Prevents problems with ineffective or socially inappropriate social interaction from recurring or persisting	Person avoids making reoccurring ineffective comments during the decision making.	Person persists in asking questions irrelevant to choosing a restaurant.

Note. ATM = automated teller machine; PIN = personal identification number.

[a]Effective use of motor and process performance skills is demonstrated when the client carries out an activity efficiently, safely, with ease, or without assistance. Effective use of social interaction performance skills is demonstrated when the client completes interactions in a manner that matches the demands of the social situation. [b]Ineffective performance skills are demonstrated when the client routinely requires assistance or support to perform activities or engage in social interaction. Ineffective use of social interaction performance skills is demonstrated when the client engages in social interactions in a manner that does not appropriately meet the demands of the social situation.

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Table 8. Performance Skills for Groups

To address performance skills for a group client, occupational therapy practitioners analyze the motor, process, and social interaction skills of individual group members to identify whether ineffective performance skills may limit the group's collective outcome. Italicized words in the middle column are specific performance skills defined in Table 7.

Performance Skill Category	Ineffective Performance by an Individual Group Member	Impact on Group Collective Outcome
Group collective outcome: Religious organization committee furnishing spaces for a preschool for member families		
Motor—Obtaining and holding objects	• Member *reaches* with excessive effort for chairs stored in closet. • Member *bends* with stiffness or excessive effort when reaching for the chairs. • Member fumbles when *gripping* writing materials in preparation for recording committee decisions for planning. • Member demonstrates limited finger dexterity to *manipulate* tools for assembling storage units for toys. • Member is unable to *coordinate* one hand and trunk to stabilize self while gripping and loading toys onto shelves.	Other members may need to take responsibility for obtaining and holding objects to accommodate the member's ineffective motor performance skills during the process of furnishing preschool spaces.
Process—Organizing space and objects	• Member repeatedly asks for help when *searching* for needed furniture or *locating* play equipment that is organized logically in near and distant places within the building. • Member does not effectively *gather* required play activity materials in the designated play spaces. • Member has difficulty *organizing* toys or play equipment within the various play spaces in a logical and orderly fashion. • Member does not *restore* toys or play equipment to storage spaces to return the preschool space to an effective order. • Member bumps into play furniture when *navigating* spaces to set up furniture to meet the needs of families or groups.	The group may need to accommodate the member's limitations in effectively organizing space and objects by adjusting the timing of the outcome to allow greater time to complete furnishing the preschool spaces.
Social interaction—Producing social interaction	• Member communicates in whispers when *producing speech* to communicate with other members about decisions for placing play equipment. • Member delays in *gesticulating* so other members do not receive effective messages while arranging toys and play equipment. • Member *speaks fluently* but too quickly when communicating to friends, resulting in challenges for other members in decision making for furnishing the preschool.	The group decision-making process may be hindered by the member's difficulty in producing social interactions. Limited communication during the tasks of placing furniture in preschool spaces may cause confusion among group members.

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Table 9. Client Factors

Client factors include (1) values, beliefs, and spirituality; (2) body functions; and (3) body structures. Client factors reside within the client and influence the client's performance in occupations.

Category	Examples Relevant to Occupational Therapy Practice
Values, Beliefs, and Spirituality—Client's (person's, group's, or population's) perceptions, motivations, and related meaning that influence or are influenced by engagement in occupations.	
Values—Acquired beliefs and commitments, derived from culture, about what is good, right, and important to do (Kielhofner, 2008)	*Person* • Honesty with self and others • Commitment to family *Group* • Obligation to provide a service • Fairness • Inclusion *Population* • Freedom of speech • Equal opportunities for all • Tolerance toward others
Beliefs—"Something that is accepted, considered to be true, or held as an opinion" ("Belief," 2020).	*Person* • One is powerless to influence others. • Hard work pays off. *Group* • Teaching others how to garden decreases their reliance on grocery stores. • Writing letters as part of a neighborhood group can support the creation of a community park. *Population* • Some personal rights are worth fighting for. • A new health care policy, as yet untried, will positively affect society.
Spirituality—"A deep experience of meaning brought about by engaging in occupations that involve the enacting of personal values and beliefs, reflection, and intention within a supportive contextual environment" (Billock, 2005, p. 887). It is important to recognize spirituality "as dynamic and often evolving" (Humbert, 2016, p. 12).	*Person* • Personal search for purpose and meaning in life • Guidance of actions by a sense of value beyond the acquisition of wealth or fame *Group* • Study of religious texts together • Attendance at a religious service *Population* • Common search for purpose and meaning in life • Guidance of actions by values agreed on by the collective
Body Functions—"The physiological functions of body systems (including psychological functions)" (WHO, 2001, p. 10). This section of the table is organized according to the classifications of the *ICF;* for fuller descriptions and definitions, refer to WHO (2001). This list is not all inclusive.	

(Continued)

Table 9. Client Factors *(cont'd)*

Category	Examples Relevant to Occupational Therapy Practice
Body Functions *(cont'd)*	
Mental functions	
Specific mental functions	
Higher level cognitive	Judgment, concept formation, metacognition, executive functions, praxis, cognitive flexibility, insight
Attention	Sustained shifting and divided attention, concentration, distractibility
Memory	Short-term, long-term, and working memory
Perception	Discrimination of sensations (e.g., auditory, tactile, visual, olfactory, gustatory, vestibular, proprioceptive)
Thought	Control and content of thought, awareness of reality vs. delusions, logical and coherent thought
Mental functions of sequencing complex movement	Mental functions that regulate the speed, response, quality, and time of motor production, such as restlessness, toe tapping, or hand wringing, in response to inner tension
Emotional	Regulation and range of emotions; appropriateness of emotions, including anger, love, tension, and anxiety; lability of emotions
Experience of self and time	Awareness of one's identity (including gender identity), body, and position in the reality of one's environment and of time
Global mental functions	
Consciousness	State of awareness and alertness, including the clarity and continuity of the wakeful state
Orientation	Orientation to person, place, time, self, and others
Psychosocial	General mental functions, as they develop over the life span, required to understand and constructively integrate the mental functions that lead to the formation of the personal and interpersonal skills needed to establish reciprocal social interactions, in terms of both meaning and purpose
Temperament and personality	Extroversion, introversion, agreeableness, conscientiousness, emotional stability, openness to experience, self-control, self-expression, confidence, motivation, impulse control, appetite
Energy	Energy level, motivation, appetite, craving, impulse
Sleep	Physiological process, quality of sleep
Sensory functions	
Visual functions	Quality of vision, visual acuity, visual stability, and visual field functions to promote visual awareness of environment at various distances for functioning
Hearing functions	Sound detection and discrimination; awareness of location and distance of sounds
Vestibular functions	Sensation related to position, balance, and secure movement against gravity
Taste functions	Association of taste qualities of bitterness, sweetness, sourness, and saltiness
Smell functions	Sensing of odors and smells
Proprioceptive functions	Awareness of body position and space

(Continued)

Table 9. Client Factors *(cont'd)*

Category	Examples Relevant to Occupational Therapy Practice
Body Functions *(cont'd)*	
Touch functions	Feeling of being touched by others or touching various textures, such as those of food; presence of numbness, paresthesia, hyperesthesia
Interoception	Internal detection of changes in one's internal organs through specific sensory receptors (e.g., awareness of hunger, thirst, digestion, state of alertness)
Pain	Unpleasant feeling indicating potential or actual damage to some body structure; sensations of generalized or localized pain (e.g., diffuse, dull, sharp, phantom)
Sensitivity to temperature and pressure	Thermal awareness (hot and cold), sense of force applied to skin (thermoreception)
Neuromusculoskeletal and movement-related functions	
Functions of joints and bones	
Joint mobility	Joint range of motion
Joint stability	Maintenance of structural integrity of joints throughout the body; physiological stability of joints related to structural integrity
Muscle functions	
Muscle power	Strength
Muscle tone	Degree of muscle tension (e.g., flaccidity, spasticity, fluctuation)
Muscle endurance	Sustainability of muscle contraction
Movement functions	
Motor reflexes	Involuntary contraction of muscles automatically induced by specific stimuli (e.g., stretch, asymmetrical tonic neck, symmetrical tonic neck)
Involuntary movement reactions	Postural reactions, body adjustment reactions, supporting reactions
Control of voluntary movement	Eye–hand and eye–foot coordination, bilateral integration, crossing of the midline, fine and gross motor control, oculomotor function (e.g., saccades, pursuits, accommodation, binocularity)
Gait patterns	Gait and mobility in relation to engagement in daily life activities (e.g., walking patterns and impairments, asymmetric gait, stiff gait)
Cardiovascular, hematological, immune, and respiratory system functions (*Note.* Occupational therapy practitioners have knowledge of these body functions and understand broadly the interaction that occurs among these functions to support health, well-being, and participation in life through engagement in occupation.)	
Cardiovascular system functions	Maintenance of blood pressure functions (hypertension, hypotension, postural hypotension), heart rate and rhythm
Hematological and immune system functions	Protection against foreign substances, including infection, allergic reactions
Respiratory system functions	Rate, rhythm, and depth of respiration
Additional functions and sensations of the cardiovascular and respiratory systems	Physical endurance, aerobic capacity, stamina, fatigability

(Continued)

Table 9. Client Factors *(cont'd)*

Category	Examples Relevant to Occupational Therapy Practice
Voice and speech functions; digestive, metabolic, and endocrine system functions; genitourinary and reproductive functions (*Note.* Occupational therapy practitioners have knowledge of these body functions and understand broadly the interaction that occurs among these functions to support health, well-being, and participation in life through engagement in occupation.)	
Voice and speech functions	Fluency and rhythm, alternative vocalization functions
Digestive, metabolic, and endocrine system functions	Digestive system functions, metabolic system, and endocrine system functions
Genitourinary and reproductive functions	Genitourinary and reproductive functions
Skin and related structure functions (*Note.* Occupational therapy practitioners have knowledge of these body functions and understand broadly the interaction that occurs among these functions to support health, well-being, and participation in life through engagement in occupation.)	
Skin functions Hair and nail functions	Protection (presence or absence of wounds, cuts, or abrasions), repair (wound healing)
Body Structures—"Anatomical parts of the body, such as organs, limbs, and their components" that support body function (WHO, 2001, p. 10). This section of the table is organized according to the *ICF* classifications; for fuller descriptions and definitions, refer to WHO (2001).	
Structure of the nervous system Structures related to the eyes and ears Structures involved in voice and speech Structures of the cardiovascular, immunological, and respiratory systems Structures related to the digestive, metabolic, and endocrine systems Structures related to the genitourinary and reproductive systems Structures related to movement	Occupational therapy practitioners have knowledge of body structures and understand broadly the interaction that occurs between these structures to support health, well-being, and participation in life through engagement in occupation.

Note. The categorization of body functions and body structures is based on the *ICF* (WHO, 2001). The classification was selected because it has received wide exposure and presents a language that is understood by external audiences. *ICF* = *International Classification of Function, Disability and Health;* WHO = World Health Organization.

Table 10. Occupational Therapy Process for Persons, Groups, and Populations
The occupational therapy process applies to work with persons, groups, and populations. The process for groups and populations mirrors that for persons. The process for populations includes public health approaches, and the process for groups may include both person and population methods to address occupational performance (Scaffa & Reitz, 2014).

Process Component	Process Step		
	Person	**Group**	**Population**
Evaluation	*Consultation and screening:* • Review client history • Consult with interprofessional team • Administer standardized screening tools	*Consultation and screening, environmental scan:* • Identify collective need on the basis of available data • For each individual in the group, ◦ Review history ◦ Administer standardized screening tools ◦ Consult with interprofessional team	*Environmental scan, trend analysis, preplanning:* • Collect data to inform design of intervention program by identifying information needs • Identify health trends in targeted population and potential positive and negative impacts on occupational performance
	Occupational profile: • Interview client and caregiver	*Occupational profile or community profile:* • Interview persons who make up the group • Engage with persons in the group to determine their interests, needs, and priorities	*Needs assessment, community profile:* • Engage with persons within the population to determine their interests and needs and opportunities for collaboration • Identify priorities through ◦ Surveys ◦ Interviews ◦ Group discussions or forums
	Analysis of occupational performance: • Assess occupational performance • Conduct occupational and activity analysis • Assess contexts • Assess performance skills and patterns • Assess client factors	*Analysis of occupational performance:* • Conduct occupational and activity analysis • Assess group context • Assess the following for individual group members: ◦ Occupational performance ◦ Performance skills and patterns ◦ Client factors • Analyze impact of individual performance on the group	*Needs assessment, review of secondary data:* • Evaluate existing quantitative data, which may include ◦ Public health records ◦ Prevalence of disease or disability ◦ Demographic data ◦ Economic data
	Synthesis of evaluation process: • Review and consolidate information to select occupational outcomes and determine impact of performance patterns and client factors on occupation	*Synthesis of evaluation process:* • Review and consolidate information to select collective occupational outcomes • Review and consolidate information regarding each member's performance and its impact on the group and the group's occupational performance as a whole	*Data analysis and interpretation:* • Review and consolidate information to support need for the program and identify any missing data
Intervention	*Development of the intervention plan:* • Identify client goals • Identify intervention outcomes • Select outcome measures	*Development of the intervention plan or program:* • Identify collective group goals	*Program planning:* • Identify short-term program objectives • Identify long-term program goals

(Continued)

Table 10. Occupational Therapy Process for Persons, Groups, and Populations *(cont'd)*

Process Component	Process Step		
	Person	**Group**	**Population**
	• Select methods for service delivery, including theoretical framework	• Identify intervention outcomes for the group • Select outcome measures • Select methods for service delivery, including theoretical framework	• Select outcome measures to be used in program evaluation • Select strategies for service delivery, including theoretical framework
	Intervention implementation: • Carry out occupational therapy intervention to address specific occupations, contexts, and performance patterns and skills affecting performance	*Intervention or program implementation:* • Carry out occupational therapy intervention or program to address the group's specific occupations, contexts, and performance patterns and skills affecting group performance	*Program implementation:* • Carry out program or advocacy action to address identified occupational needs
	Intervention review: • Reevaluate and review client's response to intervention • Review progress toward goals and outcomes • Modify plan as needed	*Intervention review or program evaluation:* • Reevaluate and review individual members' and the group's response to intervention • Review progress toward goals and outcomes • Modify plan as needed • Evaluate efficiency of program • Evaluate achievement of determined objectives	*Program evaluation:* • Gather information on program implementation • Measure the impact of the program • Evaluate efficiency of program • Evaluate achievement of determined objectives
Outcomes	*Outcomes:* • Use measures to assess progress toward outcomes • Identify change in occupational participation	*Outcomes:* • Use measures to assess progress toward outcomes • Identify change in occupational performance of individual members and the group as a whole	*Outcomes:* • Use measures to assess progress toward long-term program goals • Identify change in occupational performance of targeted population
	Transition: • Facilitate client's move from one life role or experience to another, such as ◦ Moving to a new level of care ◦ Transitioning between providers ◦ Moving into a new setting or program	*Transition:* • Facilitate group members' move from one life role or experience to another, such as ◦ Moving to a new level of care ◦ Transitioning between providers ◦ Moving into a new setting or program	*Sustainability plan:* • Develop action plan to maintain program • Identify sources of funding • Build community capacity and support relationships to continue program
	Discontinuation: • Discontinue care after short- and long-term goals have been achieved or client chooses to no longer participate • Implement discharge plan to support performance after discontinuation of services	*Discontinuation:* • Discontinue care after the group's short- and long-term goals have been achieved • Implement discharge plan to support performance after discontinuation of services	*Dissemination plan:* • Share results with participants, stakeholders, and community members • Implement sustainability plan

Table 11. Occupation and Activity Demands

Occupation and activity demands are the components of occupations and activities that occupational therapy practitioners consider in their professional and clinical reasoning process. *Activity demands* are what is typically required to carry out the activity regardless of client and context. *Occupation demands* are what is required by the specific client (person, group, or population) to carry out an occupation. Depending on the context and needs of the client, occupation and activity demands can act as barriers to or supports for participation. Specific knowledge about activity demands assists practitioners in selecting occupations for therapeutic purposes.

Type of Demand	Activity Demands: Typically Required to Carry Out the Activity	Occupational Demands: Required by the Client (Person, Group, or Population) to Carry Out the Occupation
Relevance and importance	General meaning of the activity within the given culture	Meaning the client derives from the occupation, which may be subjective and personally constructed; symbolic, unconscious, and metaphorical; and aligned with the client's goals, values, beliefs, and needs and perceived utility
	Person: Knitting clothing items for personal use, for income from sale, or as a leisure activity	*Person:* Knitting as a way to practice mindfulness strategies for coping with anxiety
	Group: Cooking to provide nutrition, fulfill a family role, or engage in a leisure activity	*Group:* Preparation of a holiday meal with family to connect members to each other and to their culture and traditions
	Population: Presence of accessible restrooms in public spaces in compliance with federal law	*Population:* Creation of new accessible and all-gender restrooms to symbolize a community's commitment to safety and inclusion of members with disabilities and LGBTQ+ members
Objects used and their properties: Tools (e.g., scissors, dishes, shoes, volleyball), supplies (e.g., paints, milk, lipstick), equipment (e.g., workbench, stove, basketball hoop), and resources (e.g., money, transportation) required in the process of carrying out the activity or occupation and their inherent properties (e.g., heavy, rough, sharp, colorful, loud, bitter tasting)	*Person:* Computer workstation that includes a computer, keyboard, mouse, desk, and chair	
	Group: Financial and transportation resources for a group of friends to attend a concert	
	Population: Tools, supplies, and equipment for flood relief efforts to ensure safety of people with disabilities	
Space demands: Physical environment requirements of the occupation or activity (e.g., size, arrangement, surface, lighting, temperature, noise, humidity, ventilation)	*Person:* Desk arrangement in an elementary school classroom	
	Group: Accessible meeting space to run a fall prevention workshop	
	Population: Noise, lighting, arrangement, and temperature controls for a sensory-friendly museum	
Social demands: Elements of the social and attitudinal environments required for the occupation or activity	*Person:* Rules of engagement for a child at recess	
	Group: Expectations of travelers in an airport (e.g., waiting in line, following cues from staff and others, asking questions when needed)	
	Population: Understanding of the social and political climate of the geographic region	

(Continued)

Table 11. Occupation and Activity Demands *(cont'd)*

Type of Demand	Activity Demands: Typically Required to Carry Out the Activity	Occupational Demands: Required by the Client (Person, Group, or Population) to Carry Out the Occupation
Sequencing and timing demands: Temporal process required to carry out the activity or occupation (e.g., specific steps, sequence of steps, timing requirements)	*Person:* Preferred sequence and timing of a client's morning routine to affirm social, cultural, and gender identity	
	Group: Steps a class of students takes in preparation to start the school day	
	Population: Public train schedules	
Required actions and performance skills: Actions and performance skills (motor, process, and social interaction) that are an inherent part of the activity or occupation	*Person:* Body movements required to drive a car	
	Group and population: See "Performance Skills" section for discussion related to groups and population	
Required body functions: "Physiological functions of body systems (including psychological functions)" (WHO, 2001, p. 10) required to support the actions used to perform the activity or occupation	*Person:* Cognitive level required for a child to play a game	
	Group and population: See "Client Factors" section for discussion of required body functions related to groups and populations	
Required body structures: "Anatomical parts of the body such as organs, limbs, and their components" that support body functions (WHO, 2001, p. 10) and are required to perform the activity or occupation	*Person:* Presence of upper limbs to play catch	
	Group and population: See "Client Factors" section for discussion of required body structures related to groups and populations	

Note. WHO = World Health Organization.

Table 12. Types of Occupational Therapy Interventions

Occupational therapy intervention types include occupations and activities, interventions to support occupations, education and training, advocacy, group interventions, and virtual interventions. Occupational therapy interventions facilitate engagement in occupation to enable persons, groups, and populations to achieve health, well-being, and participation in life. The examples provided illustrate the types of interventions that clients engage in (denoted as "client") and that occupational therapy practitioners provide (denoted as "practitioner") and are not intended to be all-inclusive.

Intervention Type	Description	Examples
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	*Person* Client completes morning dressing and hygiene using adaptive devices. *Group* Client plays a group game of tag on the playground to improve social participation. *Population* Practitioner creates an app to improve access for people with autism spectrum disorder using metropolitan paratransit systems.
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 to enhance occupational engagement.	*Person* Client selects clothing and manipulates clothing fasteners in advance of dressing. *Group* Group members separate into two teams for a game of tag. *Population* Client establishes parent volunteer committees at their children's school.
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.		
PAMs and mechanical modalities	Modalities, devices, and techniques to prepare the client for occupational performance. Such approaches should be part of a broader plan and not used exclusively.	*Person* Practitioner administers PAMs to decrease pain, assist with wound healing or edema control, or prepare muscles for movement to enhance occupational performance. *Group* Practitioner develops a reference manual on postmastectomy manual lymphatic drainage techniques for implementation at an outpatient facility.

(Continued)

Table 12. Types of Occupational Therapy Interventions *(cont'd)*

Intervention Type	Description	Examples
Orthotics and prosthetics	Construction of devices to mobilize, immobilize, or support body structures to enhance participation in occupations	*Person* Practitioner fabricates and issues a wrist orthosis to facilitate movement and enhance participation in household activities. *Group* Group members participate in a basketball game with veterans using prosthetics after amputation.
Assistive technology and environmental modifications	Assessment, selection, provision, and education and training in use of high- and low-tech assistive technology; application of universal design principles; and recommendations for changes to the environment or activity to support the client's ability to engage in occupations	*Person* Practitioner recommends using a visual support (e.g., social story) to guide behavior. *Group* Practitioner uses a smart board with speaker system during a social skills group session to improve participants' attention. *Population* Practitioner recommends that a large health care organization paint exits in their facilities to resemble bookshelves to deter patients with dementia from eloping.
Wheeled mobility	Products and technologies that facilitate a client's ability to maneuver through space, including seating and positioning; improve mobility to enhance participation in desired daily occupations; and reduce risk for complications such as skin breakdown or limb contractures	*Person* Practitioner recommends, in conjunction with the wheelchair team, a sip-and-puff switch to allow the client to maneuver the power wheelchair independently and interface with an environmental control unit in the home. *Group* Group of wheelchair users in the same town host an educational peer support event.
Self-regulation	Actions the client performs to target specific client factors or performance skills. Intervention approaches may address sensory processing to promote emotional stability in preparation for social participation or work or leisure activities or executive functioning to support engagement in occupation and meaningful activities. Such approaches involve active participation of the client and sometimes use of materials to simulate components of occupations.	*Person* Client participates in a fabricated sensory environment (e.g., through movement, tactile sensations, scents) to promote alertness before engaging in a school-based activity. *Group* Practitioner instructs a classroom teacher to implement mindfulness techniques, visual imagery, and rhythmic breathing after recess to enhance students' success in classroom activities. *Population* Practitioner consults with businesses and community sites to establish sensory-friendly environments for people with sensory processing deficits.

(Continued)

Table 12. Types of Occupational Therapy Interventions *(cont'd)*

Intervention Type	Description	Examples
Education and Training		
Education	Imparting of knowledge and information about occupation, health, well-being, and participation to enable the client to acquire helpful behaviors, habits, and routines	*Person* Practitioner provides education regarding home and activity modifications to the spouse or family member of a person with dementia to support maximum independence. *Group* Practitioner participates in a team care planning meeting to educate the family and team members on a patient's condition and level of function and establish a plan of care. *Population* Practitioner educates town officials about the value of and strategies for constructing walking and biking paths accessible to people who use mobility devices.
Training	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 differentiated from education by its goal of enhanced performance as opposed to enhanced understanding, although these goals often go hand in hand (Collins & O'Brien, 2003).	*Person* Practitioner instructs the client in the use of coping skills such as deep breathing to address anxiety symptoms before engaging in social interaction. *Group* Practitioner provides an in-service on applying new reimbursement and practice standards adopted by a facility. *Population* Practitioner develops a training program to support practice guidelines addressing occupational deprivation and cultural competence for practitioners working with refugees.
Advocacy—Efforts directed toward promoting occupational justice and empowering clients to seek and obtain resources to support health, well-being, and occupational participation.		
Advocacy	Advocacy efforts undertaken by the practitioner	*Person* Practitioner collaborates with a client to procure reasonable accommodations at a work site. *Group* Practitioner collaborates with and educates teachers in an elementary school about inclusive classroom design. *Population* Practitioner serves on the policy board of an organization to procure supportive housing accommodations for people with disabilities.

(Continued)

Table 12. Types of Occupational Therapy Interventions *(cont'd)*

Intervention Type	Description	Examples
Self-advocacy	Advocacy efforts undertaken by the client with support by the practitioner	*Person* Client requests reasonable accommodations, such as audio textbooks, to support their learning disability. *Group* Client participates in an employee meeting to request and procure adjustable chairs to improve comfort at computer workstations. *Population* Client participates on a student committee partnering with school administration to develop cyberbullying prevention programs in their district.
Group Interventions—Use of distinct knowledge of the dynamics of group and social interaction and leadership techniques to facilitate learning and skill acquisition across the lifespan. Groups are used as a method of service delivery.		
Functional groups, activity groups, task groups, social groups, and other groups	Groups used in health care 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	*Person* Client participates in a group for adults with traumatic brain injury focused on individual goals for reentering the community after inpatient treatment. *Group* Group of older adults participates in volunteer days to maintain participation in the community through shared goals. *Population* Practitioner works with middle school teachers in a district on approaches to address issues of self-efficacy and self-esteem as the basis for creating resiliency in children at risk for being bullied.
Virtual Interventions—Use of simulated, real-time, and near-time technologies for service delivery absent of physical contact, such as telehealth or mHealth.		
Telehealth (telecommunication and information technology) and mHealth (mobile telephone application technology)	Use of technology such as video conferencing, teleconferencing, or mobile telephone application technology to plan, implement, and evaluate occupational therapy intervention, education, and consultation	*Person* Practitioner performs a telehealth therapy session with a client living in a rural area. *Group* Client participates in an initial online support group session to establish group protocols, procedures, and roles. *Population* Practitioner develops methods and standards for mHealth in community occupational therapy practice.

Note. mHealth = mobile health; PAMs = physical agent modalities.

Table 13. Approaches to Intervention

Approaches to intervention are specific strategies selected to direct the evaluation and intervention processes on the basis of the client's desired outcomes, evaluation data, and research evidence. Approaches inform the selection of practice models, frames of references, and treatment theories.

Approach	Description	Examples
Create, promote (health promotion)	An intervention approach that does not assume a disability is present or that any aspect would interfere with performance. This approach is designed to provide enriched contextual and activity experiences that will enhance performance for all people in the natural contexts of life (adapted from Dunn et al., 1998, p. 534).	*Person* Develop a fatigue management program for a client recently diagnosed with multiple sclerosis *Group* Create a resource list of developmentally appropriate toys to be distributed by staff at a day care program *Population* Develop a falls prevention curriculum for older adults for trainings at senior centers and day centers
Establish, restore (remediation, restoration)	Approach designed to change client variables to establish a skill or ability that has not yet developed or to restore a skill or ability that has been impaired (adapted from Dunn et al., 1998, p. 533)	*Person* Restore a client's upper extremity movement to enable transfer of dishes from the dishwasher into the upper kitchen cabinets Collaborate with a client to help establish morning routines needed to arrive at school or work on time *Group* Educate staff of a group home for clients with serious mental illness to develop a structured schedule, chunking tasks to decrease residents' risk of being overwhelmed by the many responsibilities of daily life roles *Population* Restore access ramps to a church entrance after a hurricane
Maintain	Approach designed to provide supports that will allow clients to preserve the performance capabilities that they have regained and that continue to meet their occupational needs. The assumption is that without continued maintenance intervention, performance would decrease and occupational needs would not be met, thereby affecting health, well-being, and quality of life.	*Person* Provide ongoing intervention for a client with amyotrophic lateral sclerosis to address participation in desired occupations through provision of assistive technology *Group* Maintain environmental modifications at a group home for young adults with physical disabilities for continued safety and engagement with housemates

(Continued)

Table 13. Approaches to Intervention *(cont'd)*

Approach	Description	Examples
		Population Maintain safe and independent access for people with low vision by increasing hallway lighting in a community center
Modify (compensation, adaptation)	Approach directed at "finding ways to revise the current context or activity demands to support performance in the natural setting, [including] compensatory techniques . . . [such as] enhancing some features to provide cues or reducing other features to reduce distractibility" (Dunn et al., 1998, p. 533)	*Person* Simplify task sequence to help a person with cognitive impairments complete a morning self-care routine *Group* Modify a college campus housing building to accommodate a group of students with mobility impairments *Population* Consult with architects and builders to design homes that will support aging in place and use universal design principles
Prevent (disability prevention)	Approach designed to address the needs of clients with or without a disability who are at risk for occupational performance problems. This approach is designed to prevent the occurrence or evolution of barriers to performance in context. Interventions may be directed at client, context, or activity variables (adapted from Dunn et al., 1998, p. 534).	*Person* Aid in the prevention of illicit substance use by introducing self-initiated routine strategies that support drug-free behavior *Group* Prevent social isolation of employees by promoting participation in after-work group activities *Population* Consult with a hotel chain to provide an ergonomics educational program designed to prevent back injuries in housekeeping staff

Table 14. Outcomes

Outcomes are the end result of the occupational therapy process; they describe what clients can achieve through occupational therapy intervention. Some outcomes are measurable and are used for intervention planning and review and discharge planning. These outcomes reflect the attainment of treatment goals that relate to engagement in occupation. Other outcomes are experienced by clients when they have realized the effects of engagement in occupation and are able to return to desired habits, routines, roles, and rituals.

Adaptation is embedded in all categories of outcomes. The examples listed specify how the broad outcome of health and participation in life may be operationalized.

Outcome Category	Description	Examples
Occupational performance	Act of doing and accomplishing a selected action (performance skill), activity, or occupation (Fisher, 2009; Fisher & Griswold, 2019; Kielhofner, 2008) that results from the dynamic transaction among the client, the context, and the activity. Improving or enhancing skills and patterns in occupational performance leads to engagement in occupations or activities (adapted in part from Law et al., 1996, p. 16).	*Person* A patient with hip precautions showers safely with modified independence using a tub transfer bench and a long-handled sponge. *Group* A group of older adults cooks a holiday meal during their stay in a skilled nursing facility with minimal assistance from staff. *Population* A community welcomes children with spina bifida in public settings after a news story featuring occupational therapy practitioners.
Improvement	Increased occupational performance through adaptation when a performance limitation is present	*Person* A child with autism plays interactively with a peer. An older adult returns home from a skilled nursing facility as desired. *Group* Back strain in nursing personnel decreases as a result of an in-service education program on body mechanics for job duties that require bending and lifting. *Population* Accessible playground facilities for all children are constructed in city parks.
Enhancement	Development of performance skills and performance patterns that augment existing performance of life occupations when a performance limitation is not present	*Person* A teenage mother experiences increased confidence and competence in parenting as a result of structured social groups and child development classes. *Group* Membership in the local senior citizen center increases as a result of expanded social wellness and exercise programs. School staff have increased ability to address and manage school-age youth violence as a result of conflict resolution training to address bullying. *Population* Older adults have increased opportunities to participate in community activities through ride-share programs.

(Continued)

Table 14. Outcomes *(cont'd)*

Outcome Category	Description	Examples
Prevention	Education or health promotion efforts designed to identify, reduce, or stop the onset and reduce the incidence of unhealthy conditions, risk factors, diseases, or injuries. Occupational therapy promotes a healthy lifestyle at the individual, group, population (societal), and government or policy level (adapted from AOTA, 2020b).	*Person* A child with orthopedic impairments is provided with appropriate seating and a play area. *Group* A program of leisure and educational activities is implemented at a drop-in center for adults with serious mental illness. *Population* Access to occupational therapy services is provided in underserved areas where residents typically receive other services.
Health and wellness	*Health:* State of physical, mental, and social well-being, as well as a positive concept emphasizing social and personal resources and physical capacities (WHO, 1986). Health for groups and populations also includes social responsibility of members to the group or population as a whole. *Wellness:* "Active process through which individuals [or groups or populations] become aware of and make choices toward a more successful existence" (Hettler, 1984, p. 1117). Wellness is more than a lack of disease symptoms; it is a state of mental and physical balance and fitness (adapted from "Wellness," 1997, p. 2110)	*Person* A person with a mental health challenge participates in an empowerment and advocacy group to improve services in the community. A person with attention deficit hyperactivity disorder demonstrates self-management through the ability to manage the various aspects of their life. *Group* A company-wide program for employees is implemented to identify problems and solutions regarding the balance among work, leisure, and family life. *Population* The incidence of childhood obesity decreases.
Quality of life	Dynamic appraisal of the client's life satisfaction (perceptions of progress toward goals), hope (real or perceived belief that one can move toward a goal through selected pathways), self-concept (composite of beliefs and feelings about oneself), health and functioning (e.g., health status, self-care capabilities), and socioeconomic factors (e.g., vocation, education, income; adapted from Radomski, 1995)	*Person* A deaf child from a hearing family participates fully and actively during a recreational activity. *Group* A facility experiences increased participation of residents during outings and independent travel as a result of independent living skills training for care providers. *Population* A lobby is formed to support opportunities for social networking, advocacy activities, and sharing of scientific information for stroke survivors and their families.

(Continued)

Table 14. Outcomes *(cont'd)*

Outcome Category	Description	Examples
Participation	Engagement in desired occupations in ways that are personally satisfying and congruent with expectations within the culture	*Person* A person recovers the ability to perform the essential duties of his or her job after a flexor tendon laceration. *Group* A family enjoys a vacation spent traveling cross-country in their adapted van. *Population* All children within a state have access to school sports programs.
Role competence	Ability to effectively meet the demands of the roles in which one engages	*Person* A person with cerebral palsy is able to take notes and type papers to meet the demands of the student role. *Group* A factory implements job rotation to allow sharing of higher demand tasks so employees can meet the demands of the worker role. *Population* Accessibility of polling places is improved, enabling all people with disabilities in the community to meet the demands of the citizen role.
Well-being	Contentment with one's health, self-esteem, sense of belonging, security, and opportunities for self-determination, meaning, roles, and helping others (Hammell, 2009). *Well-being* is "a general term encompassing the total universe of human life domains, including physical, mental, and social aspects, that make up what can be called a 'good life'" (WHO, 2006, p. 211).	*Person* A person with amyotrophic lateral sclerosis achieves contentment with their ability to find meaning in fulfilling the role of parent through compensatory strategies and environmental modifications. *Group* Members of an outpatient depression and anxiety support group feel secure in their sense of group belonging and ability to help other members. *Population* Residents of a town celebrate the groundbreaking for a school being reconstructed after a natural disaster.

(Continued)

Table 14. Outcomes *(cont'd)*

Outcome Category	Description	Examples
Occupational justice	Access to and participation in the full range of meaningful and enriching occupations afforded to others, including opportunities for social inclusion and resources to participate in occupations to satisfy personal, health, and societal needs (adapted from Townsend & Wilcock, 2004)	*Person* An individual with intellectual and developmental disabilities serves on an advisory board to establish programs to be offered by a community recreation center. *Group* Workers have enough break time to eat lunch with their young children in the day care center. *Group and Population* People with persistent mental illness experience an increased sense of empowerment and self-advocacy skills, enabling them to develop an antistigma campaign promoting engagement in the civic arena (group) and alternative adapted housing options for older adults to age in place (population).

Note. AOTA = American Occupational Therapy Association; WHO = World Health Organization.

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Appendix A. Glossary

A

Activities
Actions designed and selected to support the development of performance skills and performance patterns to enhance occupational engagement.

Activities of daily living (ADLs)
Activities that are oriented toward taking care of one's own body (adapted from Rogers & Holm, 1994) and are completed on a daily basis. These activities are "fundamental to living in a social world; they enable basic survival and well-being" (Christiansen & Hammecker, 2001, p. 156; see Table 2).

Activity analysis
Generic and decontextualized analysis that seeks to develop an understanding of typical activity demands within a given culture.

Activity demands
Aspects of an activity needed to carry it out, including relevance and importance to the client, objects used and their properties, space demands, social demands, sequencing and timing, required actions and performance skills, and required underlying body functions and body structures (see Table 11).

Adaptation
Effective and efficient response by the client to occupational and contextual demands (Grajo, 2019).

Advocacy
Efforts directed toward promoting occupational justice and empowering clients to seek and obtain resources to fully participate in their daily life occupations. Efforts undertaken by the practitioner are considered advocacy, and those undertaken by the client are considered self-advocacy and can be promoted and supported by the practitioner (see Table 12).

Analysis of occupational performance
The step in the evaluation process in which the client's assets and limitations or potential problems are more specifically determined through assessment tools designed to analyze, measure, and inquire about factors that support or hinder occupational performance (see Exhibit 2).

Assessment
"A specific tool, instrument, or systematic interaction . . . used to understand a client's occupational profile, client factors, performance skills, performance patterns, and contextual and environmental factors, as well as activity demands that influence occupational performance" (Hinojosa et al., 2014, pp. 3–4).

B

Belief

Something that is accepted, considered to be true, or held as an opinion ("Belief," 2020).

Body functions

"Physiological functions of body systems (including psychological functions)" (World Health Organization, 2001, p. 10; see Table 9).

Body structures

"Anatomical parts of the body, such as organs, limbs, and their components" that support body functions (World Health Organization, 2001, p. 10; see Table 9).

C

Client

Person (including one involved in the care of a client), *group* (collection of individuals having shared characteristics or common or shared purpose, e.g., family members, workers, students, and those with similar interests or occupational challenges), or *population* (aggregate of people with common attributes such as contexts, characteristics, or concerns, including health risks; Scaffa & Reitz, 2014).

Client-centered care (client-centered practice)

Approach to service that incorporates respect for and partnership with clients as active participants in the therapy process. This approach emphasizes clients' knowledge and experience, strengths, capacity for choice, and overall autonomy (Schell & Gillen, 2019, p. 1194).

Client factors

Specific capacities, characteristics, or beliefs that reside within the person and that influence performance in occupations. Client factors include values, beliefs, and spirituality; body functions; and body structures (see Table 9).

Clinical reasoning

See *Professional reasoning*

Collaboration

"The complex interpretative acts in which the practitioners must understand the meanings of the interventions, the meanings of illness or disability in a person and family's life, and the feelings that accompany these experiences" (Lawlor & Mattingly, 2019, p. 201).

Community

Collection of populations that is changeable and diverse and includes various people, groups, networks, and organizations (Scaffa, 2019; World Federation of Occupational Therapists, 2019).

Context

Construct that constitutes the complete makeup of a person's life as well as the common and divergent factors that characterize groups and populations. Context includes environmental factors and personal factors (see Tables 4 and 5).

Co-occupation

Occupation that implicitly involves two or more individuals (Schell & Gillen, 2019, p. 1195) and includes aspects of physicality, emotionality, and intentionality (Pickens & Pizur-Barnekow, 2009).

Cornerstone

Something of significance on which everything else depends.

D

Domain

Profession's purview and areas in which its members have an established body of knowledge and expertise.

E

Education

As an occupation: Activities involved in learning and participating in the educational environment (see Table 2).
As an environmental factor of context: Processes and methods for acquisition of knowledge, expertise, or skills (see Table 4).
As an intervention: Activities that impart knowledge and information about occupation, health, well-being, and participation, resulting in acquisition by the client of helpful behaviors, habits, and routines that may or may not require application at the time of the intervention session (see Table 12).

Empathy

Emotional exchange between occupational therapy practitioners and clients that allows more open communication, ensuring that practitioners connect with clients at an emotional level to assist them with their current life situation.

Engagement in occupation

Performance of occupations as the result of choice, motivation, and meaning within a supportive context.

Environmental factors

Aspects of the physical, social, and attitudinal surroundings in which people live and conduct their lives.

Evaluation

"The comprehensive process of obtaining and interpreting the data necessary to understand the person, system, or situation. . . . Evaluation requires synthesis of all data obtained, analytic interpretation of that data, reflective clinical reasoning, and consideration of occupational performance and contextual factors" (Hinojosa et al., 2014, p. 3).

G

Goal

Measurable and meaningful, occupation-based, long-term or short-term aim directly related to the client's ability and need to engage in desired occupations (AOTA, 2018a, p. 4).

Group

Collection of individuals having shared characteristics or a common or shared purpose (e.g., family members, workers, students, others with similar occupational interests or occupational challenges).

Group intervention

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 may be used as a method of service delivery (see Table 12).

H

Habilitation

Health care services that help a person keep, learn, or improve skills and functioning for daily living (e.g., therapy for a child who does not walk or talk at the expected age). These services may include physical and occupational therapy, speech-language pathology, and other services for people with disabilities in a variety of inpatient and outpatient settings ("Provision of EHB," 2015).

Habits

"Specific, automatic behaviors performed repeatedly, relatively automatically, and with little variation" (Matuska & Barrett, 2019, p. 214). Habits can be healthy or unhealthy, efficient or inefficient, and supportive or harmful (Dunn, 2000).

Health

"State of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity" (World Health Organization, 2006, p. 1).

Health management

Occupation focused on developing, managing, and maintaining routines for health and wellness by engaging in self-care with the goal of improving or maintaining health, including self-management, to allow for participation in other occupations (see Table 2).

Health promotion

"Process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental, and social well-being, an individual or group must be able to identify and realize aspirations, to satisfy needs, and to change or cope with the environment" (World Health Organization, 1986).

Hope

Real or perceived belief that one can move toward a goal through selected pathways.

I

Independence

"Self-directed state of being characterized by an individual's ability to participate in necessary and preferred occupations in a satisfying manner irrespective of the amount or kind of external assistance desired or required" (AOTA, 2002a, p. 660).

Instrumental activities of daily living (IADLs)

Activities that support daily life within the home and community and that often require more complex interactions than those used in ADLs (see Table 2).

Interdependence

"Reliance that people have on one another as a natural consequence of group living" (Christiansen & Townsend, 2010, p. 419). "Interdependence engenders a spirit of social inclusion, mutual aid, and a moral commitment and responsibility to recognize and support difference" (Christiansen & Townsend, 2010, p. 187).

Interests

"What one finds enjoyable or satisfying to do" (Kielhofner, 2008, p. 42).

Intervention

"Process and skilled actions taken by occupational therapy practitioners in collaboration with the client to facilitate engagement in occupation related to health and participation. The intervention process includes the plan, implementation, and review" (AOTA, 2015c, p. 2).

Intervention approaches

Specific strategies selected to direct the process of interventions on the basis of the client's desired outcomes, evaluation data, and evidence (see Table 13).

Interventions to support occupations

Methods and tasks that prepare the client for occupational performance, 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 (see Table 12).

L

Leisure

"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" (Parham & Fazio, 1997, p. 250; see Table 2).

M

Motor skills

The "group of performance skills that represent small, observable actions related to moving oneself or moving and interacting with tangible task objects (e.g., tools, utensils, clothing, food or other supplies, digital devices, plant life) in the context of performing a personally and ecologically relevant daily life task. They are commonly named in terms of type of task being performed (e.g., [activity of daily living] motor skills, school motor skills, work motor skills)" (Fisher & Marterella, 2019, p. 331; see Table 7).

O

Occupation

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 Table 2).

Occupation-based

Characteristic of the best practice method used in occupational therapy, in which the practitioner uses an evaluation process and types of interventions that actively engage the client in occupation (Fisher & Marterella, 2019).

Occupational analysis

Analysis that is performed with an understanding of "the specific situation of the client and therefore [of] the specific occupations the client wants or needs to do in the actual context in which these occupations are performed" (Schell et al., 2019, p. 322).

Occupational demands

Aspects of an activity needed to carry it out, including relevance and importance to the client, objects used and their properties, space demands, social demands, sequencing and timing, required actions and performance skills, and required underlying body functions and body structures (see Table 10).

Occupational identity

"Composite sense of who one is and wishes to become as an occupational being generated from one's history of occupational participation" (Schell & Gillen, 2019, p. 1205).

Occupational justice

"A justice that recognizes occupational rights to inclusive participation in everyday occupations for all persons in society, regardless of age, ability, gender, social class, or other differences" (Nilsson & Townsend, 2010, p. 58). Occupational justice includes access to and participation in the full range of meaningful and enriching occupations afforded to others, including opportunities for social inclusion and the resources to participate in occupations to satisfy personal, health, and societal needs (adapted from Townsend & Wilcock, 2004).

Occupational performance

Accomplishment of the selected occupation resulting from the dynamic transaction among the client, their context, and the occupation.

Occupational profile

Summary of the client's occupational history and experiences, patterns of daily living, interests, values, needs, and relevant contexts (see Exhibit 2).

Occupational science

"Way of thinking that enables an understanding of occupation, the occupational nature of humans, the relationship between occupation, health and wellbeing, and the influences that shape occupation" (World Federation of Occupational Therapists, 2012b, p. 2).

Occupational therapy

Therapeutic use of everyday life occupations with persons, groups, or populations (i.e., clients) for the purpose of enhancing or enabling participation. Occupational therapy practitioners use their knowledge of the transactional relationship among the person, their engagement in valued occupations, and the context to design occupation-based intervention plans. Occupational therapy services are provided for habilitation, rehabilitation, and promotion of health and wellness for clients with disability- and non-disability-related needs. Services promote acquisition and preservation of occupational identity for those who have or are at risk for developing an illness, injury, disease, disorder, condition, impairment, disability, activity limitation, or participation restriction (adapted from American Occupational Therapy Association, 2011).

Organization

Entity composed of individuals with a common purpose or enterprise, such as a business, industry, or agency.

Outcome

Result clients can achieve through the occupational therapy process (see Table 14).

P

Participation

"Involvement in a life situation" (World Health Organization, 2001, p. 10).

Performance patterns

Habits, routines, roles, and rituals that may be associated with different lifestyles and used in the process of engaging in occupations or activities. These patterns are influenced by context and time and can support or hinder occupational performance (see Table 6).

Performance skills

Observable, goal-directed actions that result in a client's quality of performing desired occupations. Skills are supported by the context in which the performance occurred and by underlying client factors (Fisher & Marterella, 2019).

Person

Individual, including family member, caregiver, teacher, employee, or relevant other.

Personal factors

Unique features of the person reflecting the particular background of their life and living that are not part of a health condition or health state. Personal factors are generally considered to be enduring, stable attributes of the person, although some personal factors may change over time (see Table 5).

Play

Active engagement in an activity that is intrinsically motivated, internally controlled, and freely chosen and that may include the suspension of reality (Skard & Bundy, 2008). Play includes participation in a broad range of experiences including but not limited to exploration, humor, fantasy, risk, contest, and celebrations (Eberle, 2014; Sutton-Smith, 2009). Play is a complex and multidimensional phenomenon that is shaped by sociocultural factors (Lynch et al., 2016; see Table 2).

Population

Aggregate of people with common attributes such as contexts, characteristics, or concerns, including health risks.

Prevention

Education or health promotion efforts designed to identify, reduce, or prevent the onset and decrease the incidence of unhealthy conditions, risk factors, diseases, or injuries (American Occupational Therapy Association, 2020a).

Process

Series of steps occupational therapy practitioners use to operationalize their expertise in providing services to clients. The occupational therapy process includes evaluation, intervention, and outcomes; occurs within the purview of the occupational therapy domain; and involves collaboration among the occupational therapist, occupational therapy assistant, and client.

Process skills

The "group of performance skills that represent small, observable actions related to selecting, interacting with, and using tangible task objects (e.g., tools, utensils, clothing, food or other supplies, digital devices, plant life); carrying out individual actions and steps; and preventing problems of occupational performance from occurring or reoccurring in the context of performing a personally and ecologically relevant daily life task. They are commonly named in terms of type of task being performed (e.g., [activity of daily living] process skills, school process skills, work process skills)" (Fisher & Marterella, 2019, pp. 336–337; see Table 7).

Professional reasoning

"Process that practitioners use to plan, direct, perform, and reflect on client care" (Schell, 2019, p. 482).

Q

Quality of life

Dynamic appraisal of life satisfaction (perception of progress toward identifying goals), self-concept (beliefs and feelings about oneself), health and functioning (e.g., health status, self-care capabilities), and socioeconomic factors (e.g., vocation, education, income; adapted from Radomski, 1995).

R

Reevaluation

Reappraisal of the client's performance and goals to determine the type and amount of change that has taken place.

Rehabilitation

Services provided to persons experiencing deficits in key areas of physical and other types of function or limitations in participation in daily life activities. Interventions are designed to enable the achievement and maintenance of optimal physical, sensory, intellectual, psychological, and social functional levels. Rehabilitation services provide tools and techniques clients need to attain desired levels of independence and self-determination.

Rituals

For persons: Sets of 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 (Fiese, 2007; Fiese et al., 2002; Segal, 2004; see Table 6).

For groups and populations: Shared social actions with traditional, emotional, purposive, and technological meaning contributing to values and beliefs within the group or population (see Table 6).

Roles

For persons: Sets of behaviors expected by society and shaped by culture and context that may be further conceptualized and defined by the client (see Table 6).

For groups and populations: Sets of behaviors by the group or population expected by society and shaped by culture and context that may be further conceptualized and defined by the group or population (see Table 6).

Routines

For persons, groups, and populations: Patterns of behavior that are observable, regular, and repetitive and that provide structure for daily life. They can be satisfying and promoting or damaging. Routines require momentary time commitment and are embedded in cultural and ecological contexts (Fiese et al., 2002; Segal, 2004; see Table 6).

S

Screening

"Process of reviewing available data, observing a client, or administering screening instruments to identify a person's (or a population's) potential strengths and limitations and the need for further assessment" (Hinojosa et al., 2014, p. 3).

Self-advocacy

Advocacy for oneself, including making one's own decisions about life, learning how to obtain information to gain an understanding about issues of personal interest or importance, developing a network of support, knowing one's rights and responsibilities, reaching out to others when in need of assistance, and learning about self-determination.

Service delivery

Set of approaches and methods for providing services to or on behalf of clients.

Skilled services

To be covered as skilled therapy, services must require the skills of a qualified occupational therapy practitioner and must be reasonable and necessary for the treatment of the patient's condition, illness, or injury. Skilled therapy services may be necessary to improve a patient's current condition, to maintain the patient's current condition, or to prevent or slow further deterioration of the patient's condition. Practitioners should check their payer policies to ensure they meet payer definitions and comply with payer requirements.

Social interaction skills

The "group of performance skills that represent small, observable actions related to communicating and interacting with others in the context of engaging in a personally and ecologically relevant daily life task performance that involves social interaction with others" (Fisher & Marterella, 2019, p. 342).

Social participation

"Interweaving of occupations to support desired engagement in community and family activities as well as those involving peers and friends" (Schell & Gillen, 2019, p. 711) involvement in a subset of activities that incorporate social situations with others (Bedell, 2012) and that support social interdependence (Magasi & Hammel, 2004; see Table 2).

Spirituality

"Deep experience of meaning brought about by engaging in occupations that involve the enacting of personal values and beliefs, reflection, and intention within a supportive contextual environment" (Billock, 2005, p. 887). It is important to recognize spirituality "as dynamic and often evolving" (Humbert, 2016, p. 12).

T

Time management

Manner in which a person, group, or population organizes, schedules, and prioritizes certain activities.

Transaction

Process that involves two or more individuals or elements that reciprocally and continually influence and affect one another through the ongoing relationship (Dickie et al., 2006).

V

Values

Acquired beliefs and commitments, derived from culture, about what is good, right, and important to do (Kielhofner, 2008).

W

Well-being

"General term encompassing the total universe of human life domains, including physical, mental, and social aspects, that make up what can be called a 'good life'" (World Health Organization, 2006, p. 211).

Wellness

"The individual's perception of and responsibility for psychological and physical well-being as these contribute to overall satisfaction with one's life situation" (Schell & Gillen, 2019, p. 1215).

Work

Labor or exertion related to the development, production, delivery, or management of objects or services; benefits may be financial or nonfinancial (e.g., social connectedness, contributions to society, adding structure and routine to daily life; Christiansen & Townsend, 2010; Dorsey et al., 2019).

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Note: Page numbers in *italic* refer to exhibits, figures, and tables.

Perception of OTs as Responders in Disaster Management

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PURPOSE: The study explored occupational therapists' (OT) perceived roles of OTs and other healthcare professionals in different stages of disaster response (including disaster preparedness, emergency response, recovery, and development), their familiarity with the disaster management stages, and their training and likelihood of responding to disasters. A review of how OT services were impacted during the pandemic is included.

DESIGN: The quantitative survey, 'A Healthcare Practitioner Disaster Management Questionnaire,' was deployed via REDCap survey system to survey licensed OTs and OTAs actively practicing in fourteen states in the United States. Disaster management definitions were based on the model of Occupational Stewardship and Collaborative Engagement. Data were collected through convenience sampling using clinician emails provided by state licensing boards.

METHOD: Collected data were imported into SPSS for cleaning and analysis. A review of descriptive data indicated the 1,027 OTs and 122 OTAs responses were similar on personal and professional demographics; therefore, the OT and OTA respondents were combined for further analysis. Descriptive and non-parametric analyses were conducted on the nominal, ordinal, and scale data obtained.

RESULTS: Respondents (88.7%) believe that the OT profession has a role in disaster management. When asked which allied health professions have a role in to disaster management, respondents identified nurses, physician assistants, and occupational therapists among the most recognized, followed by physical therapists, physical therapy assistants, and speech-language pathologists as having useful skills. Respondents indicated they had little familiarity with disaster management stages; however, of the responses, they were more familiar with disaster preparedness and emergency response stages than recovery and development stages. Similarly, respondents had little professional experience in disaster management stages. After reviewing descriptive analyses for training in disaster management, most respondents indicated they had no training. A Spearman correlation analysis revealed a significant positive correlation between training and likelihood of responding to a disaster, suggesting that as therapists receive training the likelihood of responding to disasters increases. During the COVID-19 pandemic, restricted use of OT personnel was the most common occurrence followed by decreased admissions and referrals, current clients not receiving services, and facility closures.

CONCLUSIONS: This study found that OT practitioners believe they and other healthcare professionals have roles in the capability to respond within the different stages of disaster management, however, there is a lack of training and involvement in disaster response. For occupational therapists, receipt of training increases the likelihood of engagement in the disaster management stages, suggesting that provision of training in multiple venues is needed to increase the impact OTs have on populations affected by disasters.

IMPACT: This study contributes to the literature in occupational therapy to increase awareness of the lack of knowledge, training, and involvement of occupational therapists in the disaster management stages. Hopefully, this study provides a wake-up call to educators of the need to provide knowledge of disaster management in the training of new OT practitioners, continuing education providers of the need to offer disaster management training to practicing therapists, and all OT practitioners of the need to be involved in the health and welfare of people and communities they live in as well as around the world.

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The Role of Occupational Therapy in Disaster Preparedness, Response, and Recovery

When a societal crisis occurs, individuals, families, communities, institutions, and society as a whole become "disabled"—that is, limited in their ability to perform normal daily activities; restricted by environmental barriers; prohibited from participating in usual social roles; threatened by personal and financial losses, and subject to a variety of psychological reactions, including fear, helplessness, and loss of confidence (Scaffa, 2003). Along with everyone else, occupational therapy practitioners are victims and survivors of these experiences. However, they also have the opportunity to be part of the solution. They can use their understanding of the importance of occupation to increase readiness, to enhance the effectiveness of response, and ultimately to promote health and recovery.

Occupational therapy theorists have proposed seven ways in which occupation can mediate the effects of stressful situations and promote health (McColl, 2002). Occupation can contribute to a person's sense of mastery, and it can reinforce identity. It can restore habits and normalcy, and it can provide diversion. Many occupations (such as rest, exercise, and nutrition) are health-promoting activities, which are essential in responding to and recovering from trauma. Finally, occupation is a means through which people support themselves and others, and through which they are reminded of their connection with a spiritual force.

This paper provides a definition of disaster and a staged model for thinking about occupational therapy's contribution in times of disaster.[1] Further, it identifies 10 premises that inform occupational therapy practitioners'[2] participation in disaster relief. These premises extend occupational therapy practitioners' usual roles as therapists to persons with disabilities and help them to expand their role in relation to families, communities, and organizations that are "disabled" by disaster. The paper makes a cogent case for an occupational therapy role in all three stages of disaster relief, and it leaves occupational therapy practitioners with the challenge of how and where to become involved.

Purpose

Natural and technological disasters are common occurrences throughout the world. Disasters have a significant negative impact, both short- and long-term, on the occupational performance of individuals and communities. The focus of occupational therapy is to facilitate engagement in occupation in order to support participation in valued life roles and activities and to enhance the quality of life. Therefore, occupational therapy practitioners have an important role in responding to disasters.

The purpose of this concept paper is to provide occupational therapy practitioners with a basic understanding of disasters and the support that they can provide to individuals and communities across the spectrum of disaster preparedness, response, and recovery. The paper focuses on the impact of disasters on occupational performance, the benefits of occupational engagement during disasters, and the contribution of occupational therapy in those times.

Definitions and Background

In 1961, Charles E. Fritz, a pioneer in disaster research, defined *disasters* as

> actual or threatened accidental or uncontrollable events that are concentrated in time and space, in which a society or a relatively self-sufficient subdivision of a society undergoes severe danger, and incurs such losses to its members and physical appurtenances that the social structure is disrupted and the fulfillment of all or some of the essential functions of the society, or its subdivision, is prevented (p. 655).

This definition describes not only the physical damage and personal injuries that are typically sustained during a disaster but also the potential widespread social and economic disruption of daily-life routines.

Typically, disasters are classified into two categories: *natural* and *technological* (or *human-made*). Natural disasters include hurricanes, earthquakes, tornadoes, volcanoes,

[1]This paper, the product of a collaboration between civilian and military personnel and American and Canadian occupational therapists, arose from the work of the American Occupational Therapy Foundation's Task Force on Occupation in Societal Crises.

[2]*Occupational therapy practitioner:* An individual initially certified to practice as an occupational therapist or occupational therapy assistant or licensed or regulated by a state, district, commonwealth, or territory of the United States to practice as an occupational therapist or occupational therapy assistant and who has not had that certification, license, or regulation revoked due to disciplinary action (American Occupational Therapy Association [AOTA], 1998).

floods, landslides, and winter storms. Technological disasters include mass transportation accidents, nuclear power plant accidents, accidents involving hazardous materials (e.g., oil spills), and massively destructive fires. Newer forms of technological disasters are emerging, among them massive power failures; the spread of computer viruses; assault with biological, nuclear, or chemical weapons; and terrorism (Fischer, 1998; Schneid & Collins, 2001).

Disasters progress through five stages, each requiring different behavioral and organizational responses. In the first stage, the *pre-impact period,* a warning of impending disaster may allow for preparation. For example, the National Weather Service may issue a hurricane warning. In some cases, though, there is no warning, and the pre-impact stage is short or nonexistent.

The second stage, the *impact period,* is the shortest in duration but the most dangerous in the life cycle of a disaster. In this stage the disaster is experienced in full force. Research has shown that widespread panic, looting, price gouging, and deviant behavior during disasters are largely myth. More often, altruism is the norm. People tend to share food, equipment, and supplies and assist one another in recovery efforts (Fischer, 1998).

In the third stage, the *immediate post-impact period,* search-and-rescue efforts are initiated, the media generate increasing coverage of the event, and emergency organizations begin to respond.

During the fourth stage, the *recovery period,* clearance of debris is completed, essential services such as electricity and water are restored, preliminary reconstruction plans are initiated, and daily-life routines begin to normalize.

The fifth and final stage, the *reconstruction period,* may last from several months to several years depending on the scope and the severity of the disaster. Reconstruction involves the rebuilding not only of structures but also of individual lifestyles and a sense of community. The mental health effects of disasters often last longer than the physical manifestations (Fischer, 1998).

Premises

This paper is based on the following 10 premises:

1. Natural and technological disasters are common occurrences throughout the world.
2. Disasters can adversely affect the adaptive occupational performance of individuals and communities across all areas of occupation (Rosenfeld, 1982, 1989).
3. Disaster situations generate significant personal loss and environmental changes that can directly disrupt occupational roles, habit patterns, and routines (Rosenfeld, 1989). Performance patterns may be disrupted through the loss of loved ones, changed living situations, loss of employment, or loss of the ability to engage in other previously valued occupations.
4. Disasters also can generate significant traumatic stress. Traumatic stress affects survivors emotionally, cognitively, physically, and interpersonally (Young, Ford, Ruzek, Friedman, & Gusman, 1998).
5. Disaster victims' usual coping strategies may prove inadequate for the overwhelming stress of disaster situations (Rosenfeld, 1982; Young et al., 1998).
6. Engagement in occupation can have a moderating effect on disaster response and recovery (McColl, 2002).
7. Occupational therapy practitioners can assist individuals and communities in coping with disaster situations and in returning to optimal occupational performance (Rosenfeld, 1982, 1989).
8. In disaster situations the focus of occupational therapy is to facilitate engagement in occupation in order to support participation in adaptive disaster recovery and resumption of valued life roles and activities (AOTA, 2002).
9. The occupational therapist and the occupational therapy assistant (under the supervision of the therapist) can identify disruptions in clients' previously adaptive occupational performance patterns and help clients develop new effective patterns of performance (Rosenfeld, 1982).
10. The role of the occupational therapy practitioner in disaster response is to enhance the effective occupational performance of disaster survivors by facilitating the process of occupational adaptation (Rosenfeld, 1982).

Discussion: Occupational Therapy Contributions in Times of Disaster

Occupational therapy practitioners can and should be involved in the three aspects of disaster preparedness, response, and recovery. In working with individuals and communities affected by disasters, practitioners bring a set of core practice skills founded on the importance of occupational engagement. Working together with the client, occupational therapists and occupational therapy assistants can plan and implement interventions that enable people to reestablish balance in daily life in activities of daily living, work, leisure, and social participation by

- Analyzing occupations and activities to determine the underlying requisites for effective performance;
- Evaluating occupational performance (functional abilities) in relation to specific activities, tasks, and occupations, and

- Configuring physical and psychological environments to maximize function and social integration.

In addition, occupational therapy practitioners have mental health skills in common with other professionals that are useful in disaster management and response. Possession of these skills facilitates inclusion of occupational therapy practitioners on mental health intervention teams in times of disaster.

The following are examples of potential occupational therapy contributions in disaster preparedness, response, and recovery.

Occupational Therapy Contributions in Disaster Preparedness

Disaster preparedness involves actions taken before a disaster that enable a community to respond effectively. This requires planning at the community, organizational, and household levels. Disaster planning roles, by definition, continue over time and must respond to changing levels of threat. To meet this need for flexibility, some roles may be long-term, while others will be specific to an issue and may be long- or short-term. Planned interventions designed to address system-level concerns, as well as direct service interventions for the individual, are necessary to accomplish safety and normalization. Organizations and businesses must develop emergency response plans, train employees in how to handle emergency situations, acquire needed supplies and equipment, and conduct response drills and exercises (Tierney, Lindell, & Perry, 2001). Individuals must know what these plans entail so that they can proactively remain safe or seek help, when needed, in a timely and efficient way. In essence, disaster planning requires an activity analysis of what will be expected of individuals and agencies when a disaster occurs. Interventions must be designed to be meaningful and purposeful to those engaged in them, and they must support the individual or the agency in performing what the context of the disaster requires.

Knowing the hierarchical structure of agencies and organizations involved in planning, response, and recovery from disasters is important. The National Disaster Medical System is a section within the U.S. Department of Homeland Security, Federal Emergency Management Agency (FEMA). It is responsible for managing and coordinating the federal medical response to major emergencies and federally declared disasters. Its focus is to ensure medical response to a disaster area in the form of teams, supplies, and equipment; move injured people from disaster sites to unaffected areas; and identify the types of medical care available at participating hospitals in unaffected areas. All states are divided into local regions with Disaster Medical Assistance Teams. These teams develop and implement plans to meet physical and mental health needs during disasters in their areas. State, county, and local agencies; businesses; and individuals may assist these teams in planning and in disaster response and recovery. Becoming affiliated with local and national organizations, such as the American Red Cross, mental health crisis services, critical incident stress management (CISM) teams, and employee assistance programs, prior to a disaster increases one's credibility and facilitates involvement when a disaster occurs.

Occupational therapy practitioners can select roles that fit their personal availability and activity preferences at the system level just identified or within their personal context. Because so many occupational therapy practitioners work in health care facilities, they can easily expand a discussion of existing policies, procedures, and occupational therapy roles for the safety of clients during a fire or severe weather conditions to a consideration of what to do when these conditions continue for an extended period. For example, when a predicted hurricane arrives, plans are already in place for securing facilities, moving those with special needs, and providing food and shelter and necessary medications for the short term. But if the storm is fierce, and if there is great destruction, then staff need to be able to design and adapt spaces, modify expectations, create new physical and psychological environments, and provide support services for those under their care for an unknown period of time.

Knowledge of available resources and understanding of local plans for responding to such disasters is critical if the therapist is to facilitate rapid humanitarian responses. Sensitivity to occupational performance needs becomes the marker of the services provided by occupational therapy practitioners, unlike any that are likely to be provided by other members of the response team. It is also essential that practitioners have in place appropriate plans for their family's care during the extended period when they may need to remain on duty at their institution. This will help to prevent conflicting demands on their energies and emotions.

If in the event of a disaster, people with mobility or sensory disabilities are to be moved to a temporary emergency location not specifically designed to accommodate their needs, occupational therapy practitioners can—within their skill level and arena of practice—modify and adapt environments to promote more independent function. Occupational therapy practitioners planning system-level interventions can ensure that planned emergency sites are organized in ways that minimize environmental barriers. For example, they can ensure that people with mobility limitations will be located near restrooms to facilitate independence in self-care. Such planning also decreases the number of environmental modifications or kinds of adaptive equipment that

will be required to address self-care needs and privacy concerns. In addition, occupational therapy practitioners can help employers design plans to evacuate workers with disabilities effectively in the event of an emergency, and they can train staff and volunteers to work in shelters for people with special needs.

Occupational Therapy Contributions in Disaster Response

Emergency response involves actions taken just prior to, during, and shortly after disaster impact to address the immediate needs of victims and to reduce damage, destruction, and disruption. Emergency response activities include detection of threats, dissemination of warnings, and evacuation of vulnerable populations. In addition, they include search for and rescue of victims, provision of emergency medical care, and furnishing of food and shelter for displaced persons (Tierney et al., 2001).

During times of disaster or emergency, all professionals are called on to provide their expertise voluntarily in the service of others. Occupational therapy practitioners can provide a variety of services to individuals and families who have evacuated their homes and workplaces and are living in emergency shelters, or who are "sheltering in place" (i.e., remaining in their personal homes or other residences, such as assisted-living facilities, foster and group homes, and long-term-care facilities). In addition, specially trained occupational therapists and occupational therapy assistants under the supervision of an occupational therapist can provide supportive mental health services to first responders and volunteers.

Occupational therapy practitioners are qualified to provide disaster response services to people with special needs. FEMA defines "special needs populations" as people in the community with physical, mental, or medical care needs who may require assistance before, during, or after a disaster or an emergency, after exhausting their usual resources and support network. During a disaster, people with special needs may be moved to regular shelters or shelters for people with special needs, or they may shelter in place. Occupational therapy services may include supervising staff and volunteers at special-needs shelters, making home visits or telephone calls to those sheltering in place, and facilitating support groups designed to reduce anxiety and stress. Occupational therapy practitioners also may provide support for displaced, confused adults and children until their caregivers can be identified and located.

People who are displaced from their homes and workplaces to emergency shelters face a variety of challenges. People of different cultures and races with different beliefs and habits often are forced to live in one large room with no privacy. Children are bored, a general sense of uneasiness pervades, and stress levels increase. Using a client-centered approach, occupational therapy practitioners can evaluate the needs of people in the shelter and provide appropriate services. Interventions might include providing structure in daily routines, identifying and emphasizing people's strengths, encouraging creative expression of feelings, coordinating age-appropriate play for children, and providing opportunities for stress management (Newton, 2000).

Occupational therapy is based on the premise that engagement in occupations facilitates adaptation. Occupation can help disaster survivors reestablish their lost sense of control. Focused, constructive activity, such as helping others, moves people beyond shock and denial. This strategy is especially effective for survivors who are being disruptive. By focusing on occupations that help such people take charge of their life as active participants in their ongoing survival and adjustment to change, occupational therapy practitioners can help them regain their sense of mastery and overcome any sense of guilt from a perceived failure to prepare for the disaster or to protect their family. By engaging in play, vigorous physical activity, or valued leisure occupations, survivors can get a brief respite from recurring thoughts, worries, and concerns about the future.

First responders, including firefighters, police, and emergency medical personnel, also may benefit from occupational therapy. These individuals work long hours under difficult circumstances and often are away from home. Occupational therapists can observe first responders and volunteers for signs of distress, and together with occupational therapy assistants, can provide respite or other appropriate interventions (Newton, 2000). Supportive mental health services may take the form of *critical incident stress debriefings* (CISDs). A CISD is a seven-step, small-group technique for crisis intervention that is part of a larger *critical incident stress management* (CISM) program (Mitchell, 2003). CISDs involve structured discussions of the traumatic events, designed to help people cope with the stressors they have experienced. Such debriefings are thought to lessen the harmful effects of traumatic events. Special training in CISM is required to conduct CISD sessions (Mitchell, 2003). The U.S. military has used these debriefings for many years, and occupational therapists are one of the professional groups trained to conduct them (Newton, 2000).

Occupational Therapy Contributions in Disaster Recovery

Postdisaster recovery involves repair and rebuilding of property, reestablishment of public utilities, and restoration of

disrupted social and economic activities and routines. It also includes efforts to enhance the psychosocial well-being and the quality of life of the community members affected (Tierney et al., 2001).

Following disasters, many survivors experience acute stress reactions (see Table 1). Some survivors may suffer lasting psychological effects from the traumatic stress of their experience. These posttraumatic stress symptoms may be severe enough to manifest themselves as depression or an anxiety disorder. One such anxiety disorder is posttraumatic stress disorder (PTSD). Characteristic of PTSD is persistent reexperiencing of the event (e.g., in nightmares and flashbacks), avoidance of reminders of the trauma and numbing of emotions (e.g., difficulty recalling aspects of the trauma and detachment from others), and heightened physiological arousal (e.g., insomnia, irritability, and an exaggerated startle response), all lasting more than 1 month (American Psychiatric Association, 1994). In addition, and of greatest concern to the occupational therapy practitioner, a person with PTSD may experience significant occupational dysfunction.

Both for short-term, "normal" stress reactions and those that persist over time, occupational therapy practitioners can provide supportive, informative, and educational counseling, as well as crisis intervention to help survivors deal with the consequences of their experience (Roberts, 1995). Clarke (1999) supports this notion that the "use of self" is integral to occupational therapy and that "there appears to be no question that occupational therapists use counseling skills every day in practice" (p. 137). However, occupational therapy is a triadic relationship consisting of the client, the therapist, and the activity. Without the use of activity, occupational therapy does not occur (Clarke, 1999). This differentiates occupational therapy from other mental health approaches.

Occupation and activity can help clients cope with traumatic stress and meet survival needs. Occupational engagement provides diversion from stressful events and helps reestablish a sense of mastery in a situation in which a person feels a loss of control. Participation in occupation facilitates restoration of adaptive habits, supports a person's sense of identity, and helps establish a spiritual connection in the disaster situation (McColl, 2002). The military has long used occupational therapy to help soldiers overcome occupational dysfunction due to the stress of war (Ellsworth, Laedtke, & McPhee, 1993; Laedtke, 1996), to support their role identity, and to restore their confidence in their ability to function (Gerardi, 1996, 1999; Gerardi & Newton, 2004).

For persons diagnosed with PTSD, occupation can be used to recover and enhance skills required by one's daily life roles. Such interventions may focus on activities of daily

Table 1. Common Acute Stress Reactions to Disaster

Emotional Effects	Cognitive Effects
Shock	Impaired concentration
Anger	Impaired decision-making ability
Despair	Memory impairment
Emotional numbing	Disbelief
Terror	Confusion
Guilt	Distortion
Grief or sadness	Decreased self-esteem
Irritability	Decreased self-efficacy
Helplessness	Self-blame
Loss of derived pleasure from regular activities	Intrusive thoughts and memories
Dissociation (e.g., perceptual experience seems "dreamlike," "tunnel vision," "spacey," or on "automatic pilot")	Worry
Physical Effects	**Interpersonal Effects**
Fatigue	Alienation
Insomnia	Social withdrawal
Sleep disturbance	Increased conflict within relationships
Hyperarousal	Vocational impairment
Somatic complaints	School impairment
Impaired immune response	
Headaches	
Gastrointestinal problems	
Decreased appetite	
Decreased libido	
Startle response	

Note. From *Disaster Mental Health Services: A Guidebook for Clinicians and Administrators,* by B. H. Young, J. D. Ford, J. I. Ruzek, M. J. Friedman, & F. D. Gusman, 1998, Menlo Park, CA: National Center for Post-Traumatic Stress Disorder, Department of Veterans Affairs. Available at www.ncptsd.org/publications/disaster/.

living to enhance independent living; coping skills (relaxation, biofeedback, etc.) to deal with stress, anxiety, and physiological arousal; and socialization skills to decrease emotional and social withdrawal and to increase socialization (Davis & Kutter, 1998; Froelich, 1992; Rosenfeld, 1982, 1989; Short-Degraff & Engelman, 1992). Expressive media can be used to help clients reexperience their trauma in a safe supportive environment. This enables them to explore and discover how they have been affected by the event and to practice skills to deal more effectively with their physiological and emotional responses (Davis, 1999; Froelich, 1992; Morgan & Johnson, 1995; Short-Degraff & Engelman, 1992).

As part of the intervention team, occupational therapy practitioners can help clients develop coping skills to deal with the aftereffects of their experience. Additionally, through engagement in occupation, disaster survivors can restructure their habits and routines to cope more effectively with stress and anxiety, to enhance their sense of mastery over their environment, and to participate in their valued life roles.

Conclusion

In summary, occupational therapy practitioners can have a significant role in disaster preparedness, response, and recovery. For example, in preparation for disaster, practitioners can

- Participate in facility-level and community-wide planning efforts,
- Design special-needs shelters and train staff and volunteers, and
- Assist businesses and employers in developing plans for evacuating employees with disabilities.

During the disaster response, practitioners can

- Provide supportive mental health services to victims and their families;
- Provide supportive mental health services to first responders, such as police, firefighters, and military personnel;
- Manage special needs shelters;
- Provide supportive services by telephone or visits to those sheltering in place;
- Provide occupational interventions in shelters; and
- Facilitate psychoeducational support groups to decrease anxiety and stress.

Throughout the disaster recovery phase, practitioners can provide occupation-based and psychoeducational mental health services for persons with acute stress reactions and PTSD.

Occupational therapy has much to offer individuals and communities affected by disaster. The profession's holistic approach and its focus on occupational engagement and adaptation constitute its contribution to disaster management. However, to be effective in this arena, occupational therapy practitioners must

- Define and establish their role in disaster preparedness, response, and recovery (McDaniel, 1960);
- Be aware of existing hospital, institutional, work site, and community disaster plans;
- Be knowledgeable about how national, state, and local governments and private agencies involved in disaster management are organized and how to gain entry into these systems;
- Develop skills and train for their role in disaster response and recovery; and
- Be personally and professionally prepared to respond effectively to disaster situations (see Table 2).

Occupational therapy practitioners can use their professional expertise and the power of occupational engagement to restore control, order, and quality of life and to normalize lives in crisis when individuals, families, and communities are disrupted by natural or technological disasters.

A quote from C. S. Lewis written for another time remains relevant today as occupational therapy practitioners think about their response to disaster, both as private individuals and as professionals. It reminds them of the power of occupation to restore and uphold humanity in stressful times:

> The first action to be taken is to pull ourselves together. If we are to be destroyed by an atomic bomb, let that bomb, when it comes, find us doing sensible and human things—praying, working, teaching, reading, listening to music, bathing the children, playing tennis, chatting to our friends over a pint and a game of darts—not huddled together like frightened sheep and thinking about bombs. (Lewis, 1986, pp. 73–74)

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Table 2. Common Acute Stress Reactions to Disaster

Title	Web Address	Description
Disaster Preparedness for Persons With Disabilities	www.redcross.org/services/disaster/beprepared/disability.html	Booklet
Disaster Preparedness for Seniors by Seniors	www.redcross.org/services/disaster/beprepared/seniors.html	Booklet
Disaster Preparedness for Persons With Disabilities	www.accessiblesociety.org/topics/independentliving/disasterprep.htm	Web site prepared by June Isaacson Kailes, vice-president of the Access Board
National Center on Emergency Preparedness for Persons With Disabilities	www.disabilitypreparedness.org/	Web site focused on ensuring that all people are included in development of plans for protection from natural and technological disasters
Disaster Mental Health Services: A Guidebook for Clinicians and Administrators	www.ncptsd.org/publications/disaster/	Publication of National Center for Post-Traumatic Stress Disorder
Training Manual for Mental Health and Human Service Workers in Major Disasters	www.mentalhealth.org/publications/allpubs/ADM90-538/Default.asp	Training manual developed by the U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services
Federal Emergency Management Agency (FEMA)	www.fema.gov	Web site of FEMA, a formerly independent agency that became part of the U.S. Department of Homeland Security in March 2003; responsible for responding to, planning for, recovering from, and mitigating against disasters
Emergency Management Institute (EMI)	www.training.fema.gov/EMIWeb/index.asp	Web site of EMI, a nationwide training program of resident and nonresident courses to enhance U.S. emergency management practices
A Citizen Guide to Disaster Preparedness	http://purl.access.gpo.gov/GPO/LPS31779	Booklet prepared by FEMA and published by the Federal Citizen Information Center, General Services Administration (2003)
International Critical Incident Stress Foundation (ICISF)	www.icisf.org/	Web site of ICISF, a nonprofit, open-membership foundation dedicated to prevention and mitigation of disabling stress through provision of education, training, and support services for all emergency medical service professions; continuing education and training in emergency mental health services; and consultation in establishment of Crisis and Disaster Response Programs for varied organizations and communities worldwide
Emergency Planning and Special Needs Populations	http://training.fema.gov/EMIWeb/pub/register.html	Course materials for training program sponsored by EMI
National Disaster Medical System	http://ndms.dhhs.gov	Web site of the National Disaster Medical System, a section within U.S. Department of Homeland Security that has responsibility for managing and coordinating federal medical response to major emergencies and federally declared disasters

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The Opportunity for Occupational Therapy in Pediatric Disaster Recovery

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As natural disasters increase in frequency throughout the world, more children and families are exposed to disaster-related stress and trauma. Many children with disaster exposure face occupational disruption, in which common activities, roles, and relationships are damaged or destroyed. In this descriptive column, we explore the impact that natural disasters have on children, the contribution of pediatric occupational therapy to disaster management, and the opportunity for occupational therapy practitioners to engage in collaborative psychosocial and activity interventions during disaster recovery. Through trauma-informed occupational therapy, children in traditional and community-based services will benefit from assistance in restoring normalcy. With this column, we aim to contribute to the continued exploration of roles in pediatric disaster prevention and recovery and a call for qualitative and quantitative scholarship in this setting.

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A *disaster* is a non-normative life event with natural, technological, or sociological causes that disrupts daily life from days to years (Taylor et al., 2011). According to the National Centers for Environmental Information (2022), 20 natural disasters occurred in the United States in 2021, resulting in grief, serious loss, and economic costs surpassing $1 billion each. Natural disasters such as mudslides, wildfires, tornadoes, hurricanes, and storms have affected lives, homes, families, and the health of their communities (American Occupational Therapy Association [AOTA], 2011). Natural events can cause toxic stress because of migration, interruption in health care and socialization routines, and unexpected economic challenges (Dennis et al., 2015). These disasters cause disruptions that can have traumatic effects on the co-occupations of families; the caregiver's role of providing comfort, basic needs, and social interaction; and children's occupations (AOTA, 2020). Therefore, emergency disaster recovery continues to be a need after natural disasters.

Impact on Children

Although natural disasters also affect adults, children in disasters are an especially vulnerable population. Children who experience natural disasters may have to deal with the effects of grief; loss of safety and security; displacement from home and school; changes in their parents' mental health; and loss of social support, typical routines, and roles (Kousky, 2016; Roberson, 2017). Younger children may have attachment issues or separation anxiety, exhibit regressive behaviors in their self-care, or demonstrate decreased social participation (Roberson, 2017).

Although younger children may present with behavioral problems or trauma-related fears, adolescents may have more symptoms of posttraumatic stress disorder (PTSD), depression, or substance abuse (Ruggiero et al., 2015). Adolescents may experience social isolation, depression, or maladaptive behaviors, leading to dysfunction in school, work, and leisure participation (Roberson, 2017).

The literature suggests that postdisaster trauma may differ not only according to the child's developmental level but also in the level of disaster exposure. Many children are resilient, but children with great exposure to natural disasters are at risk for developing PTSD or other stress-related symptoms. For children with previous trauma, adverse childhood experiences, decreased social support, or ongoing racialized and environmental stress, disaster exposure exacerbates these factors.

Children and families of historically excluded populations, people with disabilities, immigrants and refugees, and those living in resource-poor areas may have increased vulnerability. These populations can have inequitable risk exposure and decreased access to social resources, leading to extensive displacements and increased

negative consequences because of previous injustices in housing segregation and environmental systems (Gotham, 2017). In addition, children and families suffer when essential community services withdraw because of damage in a neighborhood, affecting those with existing health care needs, food insecurity, or decreased social support (Kousky, 2016).

Occupational Therapy in Disaster Recovery

Occupational therapy practitioners can help vulnerable populations affected by traumatic experiences because they are well prepared to help promote engagement in habits, rituals, routines, and occupations to foster mental health and occupational participation (AOTA, 2018). Because natural disaster exposure can have adverse effects on emotional, physical, and mental well-being, it is a traumatic experience with implications for occupational functioning (Fette et al., 2019). Given the knowledge of the mental health and developmental effects of disaster-related exposure, psychosocial and occupation-based interventions need to address recovery.

Occupational therapy practitioners understand the association between active engagement and positive mental health as well as the importance of activity and occupation-based interventions for mental health (Cahill et al., 2020). AOTA and the World Federation of Occupational Therapists (WFOT) have resources on disaster recovery, the impact of disasters on occupational performance, and the role of occupational therapy on a disaster relief team (see, e.g., Parente et al., 2017; Pizzi, 2015; Taylor et al., 2011). However, research is lacking on occupation-centered interventions that specifically address children affected by natural disasters.

According to AOTA's (2018) *Societal Statement on Stress, Trauma, and Posttraumatic Stress Disorder,* with the knowledge that occupational therapy practitioners have of trauma-informed care, fostering occupational participation, and mental health, occupational therapy should have a more substantial presence in stress- and trauma-related interventions. Occupational therapy practitioners can analyze the fit among the environment, occupation, and the child; structure environments; and help develop social–emotional skills to regain routines and promote resilience (Petrenchik & Weiss, 2015). When occupational therapy is not an integral part of the disaster recovery team, children do not have a professional assessing their needs and concerns using a holistic, occupation-centered lens.

Treatment Approaches

When supporting children post-disaster, it is vital that they return to normal routines and activities (Mutch & Gawith, 2014). To help children cope and return to everyday routines, health professionals have used cognitive–behavioral approaches, play, art therapy, and psychosocial and child-led interventions that have shown promising results (Lai et al., 2014; Rolfsnes & Idsoe, 2011). Occupational therapy practitioners can engage in programs to foster improved mental health, resiliency, and occupational performance in interventions such as yoga, performing arts, social skills programs, stress management, mental health education, and playgroups (Arbesman et al., 2013).

Play Therapy

For young children who have experienced a disaster, studies have shown that play has a notable and effective role in recovery. Bondoc and Ching (2015) used a qualitative case study to assess an occupation-based intervention that involved creating a pediatric activity area that included opportunities for play and social interaction after a typhoon in the southern Philippines. More than 500 children participated in the community-based intervention, and clinical observations showed improved occupational routines (Bondoc & Ching, 2015). A child affected by trauma may struggle with play and learning; therefore, by targeting play skills, practitioners can rebuild safety and normalcy into routines and roles (Sanderson et al., 2016).

Activity and Child-Led Interventions

Children are a unique population because they process trauma differently than adults but also hold key roles in the recovery process within the community (Freeman et al., 2015). In a participatory research project, three schools affected by earthquakes chose collaborative projects (an illustrated book, mosaic panels, and a documentary) to help students actively engage in the recovery process (Mutch & Gawith, 2014). Students found that the project was an overall positive experience; created emotional distance from the impact of the natural disaster; and provided safe, child-involved opportunities for healing and emotional processing (Mutch & Gawith, 2014). Occupational therapy practitioners are well equipped to collaborate with youth to build emotional skills, resiliency, and a sense of connectedness through meaningful activities.

Psychosocial Interventions

Children exposed to trauma benefit from consistent, structured care and cognitive–behavioral approaches to improve psychological resilience (Chen et al., 2014). In a Critically Appraised Topic, Ladderud et al. (2018) found moderate evidence that cognitive–behavioral therapy interventions (including Cognitive Behavioral Intervention for Trauma in Schools, trauma-focused cognitive–behavioral therapy, and Bounce Back) reduced PTSD, depression, and anxiety symptoms among children and adolescents. Through psychosocial interventions, practitioners can also treat children in need of intervention because of a natural disaster in collaboration with other health care professionals. In an open feasibility

trial by Stasiak et al. (2018), psychologists and an occupational therapy practitioner administered an online cognitive–behavioral therapy program for children and adolescents with anxiety symptoms related to earthquakes. Researchers found that 6 mo after completing the intervention, more than half of the participants had reduced anxiety symptoms and reported improvements in quality of life (Stasiak et al., 2018). This study is a notable example of the opportunity for practitioners to engage in psychosocial interventions and use cognitive–behavioral principles.

Implications for Occupational Therapy

Practitioners can assist in several ways to heal trauma and facilitate resiliency and hope among children with disaster exposure (Pizzi, 2015). As part of the intervention team, practitioners can help children develop coping skills and restore participation in their valued roles, habits, and routines (AOTA, 2011) by using the evidence-based interventions outlined in Table 1. It is essential that professionals recognize the distinct needs of children in disaster recovery and include them as active participants in their individual and community healing (Lopez et al., 2012). With their knowledge of occupational disruption and preexisting presence in their community, local, pretrained occupational therapy practitioners can support children through school and community programs. Practitioners can network and collaborate with community leaders and health care professionals on recovery programs and facilitate the use of support groups and occupation-based services for families during the disaster recovery period (AOTA, 2011; WFOT, 2014).

Future Steps

It is up to practitioners to take steps to learn about disaster recovery and trauma-informed interventions and to be trained in advance to volunteer resources and time. In addition to understanding disaster-related terminology, practitioners should also learn about the structure of local and national organizations involved in disaster recovery (AOTA, 2011). Because child care providers and school staff may be the first to encounter children after a disaster, occupational therapy practitioners in school and community settings should be aware of signs of trauma and changes in clients' coping and regulation skills. Practitioners can create safe, predictable environments to support disaster-exposed families, but they should also recognize when to refer clients to those with advanced trauma-informed training (Fette et al., 2019).

The American Academy of Pediatrics (2022) has a plethora of resources, toolkits, and education opportunities for health care professionals' use in considering children's needs in disaster planning and response. The WFOT (2019) also has a training course, *Disaster Management for Occupational Therapists,* to help practitioners better understand their role in disaster management and to use occupations to restore health and well-being. In addition, practitioners can learn how to develop evidence-based programs from occupational therapy practitioners in other regions.

Disaster recovery intervention does not come without challenges. Disasters and their impact are specific to the area and the community. Devastation rarely comes with advance warning, and affected families may be difficult to reach postdisaster (Masten & Osofsky, 2010). Reflective practitioners should be aware of inequities in access to and equality of care for youth and families of color. Given environmental and racial stressors, parents of color may have difficulty with coregulation, lessening the protective barrier for children during disaster recovery (Fortuna et al., 2020). Local mental health professionals may also have increased distress from working with the intense needs of the community while also working through their own recovery process. Practitioners should educate themselves and partner with community leaders to provide a path of recovery that reflects the customs and history of affected communities and that intentionally creates safe and supportive environments.

Even with the previously noted barriers in the recovery process, the profession needs current qualitative and quantitative research that captures the experiences and needs of local communities. While continuing to focus on mental

Table 1. Examples of Interventions for Disaster-Related Stress and Trauma

Outcome	Programs and Interventions
Restoring roles and routines	Task and environment modification, structured daily routines
Coping and resiliency	Stress management skills, play groups, performing arts
Self-regulation	Yoga, mindfulness strategies, physical activity, sensory-based approaches, Zones of Regulation (Kuypers, 2013; Petrenchik & Weiss, 2015)
Social participation	Social skills programming, play groups, antibullying programs (Arbesman et al., 2013)
Community collaboration	Collaborative projects (e.g., music, film, dance, mosaic art, crafts), parent-focused interventions, CBITS, Bounce Back, trauma-focused cognitive–behavioral therapy (Fette et al., 2019; Ladderud et al., 2018)

Note. CBITS = Cognitive Behavioral Intervention for Trauma in Schools.

health roots and program planning, occupational therapy practitioners can assist in activity-based, psychosocial, and tiered intervention approaches in pediatric settings to deliver appropriate care to children affected by natural disasters, forced displacement, exposure to violence, and other manmade hazards. From advocacy for equitable community resources and disaster preparation to psychosocial interventions for families and occupation-focused research, practitioners have a unique opportunity to contribute to pediatric disaster services.

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American Occupational Therapy Association

IN THE COMMUNITY

Natural disaster evacuation planning: Supporting children with SPD and their families

Kathryn Hamlin-Pacheco, Volume 28 • Issue 12 • December 2023, pp. 24-27 12/01/2023

Natural disasters including hurricanes, tsunamis, wildfires, and floods impact millions of people around the world each year (Center for Research on the Epidemiology of Disasters, 2023). As these events increase in number and consequence, occupational therapy practitioners (OTPs) have a key role in helping families who have children with sensory processing disorder (SPD) plan and prepare for safe evacuations.

Disability, Disaster Vulnerability, and Disaster Preparedness

Natural disasters threaten the health and well-being of all people; however, those with disabilities are especially vulnerable, are disproportionality impacted, and have needs that are often overlooked or disregarded (National Council on Disability [NCO]. 2006a; World Federation of Occupational Therapists [WFOT], 2022; World Health Organization [WHO], 2022). As a subset of this population, those with mental health disorders have been found to experience significant disparity in disaster situations and can be "doubly vulnerable" during an emergency, both because of their mental health condition and because of deprivation of typical supports (Inter-Agency Standing Committee, 2007, p. 124). In fact, the National Council on Disability has reported that because of poor disaster planning, many individuals with psychiatric disorders have "died or unnecessarily suffered severely traumatic experiences" (NCO, 2006b, p. 3). Although efforts to support people with all types of disabilities in disaster preparedness is improving, the challenges that these communities face during natural disasters continue to be disenabling or unduly difficult (Federal Emergency Management Agency [FEMA]. 2023; Testimony of the chairman of the National Council on Disability, 2021).

Taking this information and focusing it on pediatric populations reveals further disparity. Children and adolescents with disabilities and their families experience higher levels of exposure to disasters yet lower levels of preparedness than other members of the population (Mann et al., 2021; Peek & Stough, 2010). In addition, unique vulnerabilities of this population place them at higher risk for negative outcomes during and after disasters (Mann et al., 2021; Stough et al., 2017). For example, a child who uses augmentative and alternative communication may have difficulty expressing their concerns, fears, or questions during an emergency (Boesh et al., 2022). A child with autism may experience difficulty when encountering new and unexpected stimuli during an evacuation (Asher and Pollack, 2009). Despite the fact that these challenges can be anticipated and mitigated, children with disabilities are often excluded from disaster risk reduction planning efforts, with the focus instead being either on adults with disabilities or on children, but rarely on the intersection of the two (Peek & Stough, 2010; Ronoh et al., 2015), and thus the problem persists.

An OTP's understanding of occupations, development, family roles, performance skills, and the impact of environment and context afford them the ability to use a multidimensional approach to anticipating and planning for needs of children with disabilities and their families during an evacuation. Just as OTPs support success in typical environments, so, too, can they help families consider how their child's needs may be impacted during an evacuation. This is a key component of disaster planning, and the OTP's role is so important that both the American Occupational Therapy Association (AOTA, 2017) and WFOT (2022) call for OTPs' active participation in disaster preparation and response.

Helping Families With Children Who Have SPD Plan for Evacuation

Imagine a typical evacuation scenario: adults rushing to pack, children not fully understanding what is happening, traveling by car for hours, arriving at an unfamiliar location, and staying for days in a small hotel room or a packed community shelter. It is easy to imagine sensory-based challenges that a child

with SPD may encounter: unfamiliar sights and sounds, lack of familiar food, small spaces that do not afford typical movement opportunities, and crowded areas where it is easy for a child to get lost. These are all challenges that families who have a child with SPD face when considering whether to evacuate from a natural disaster. If they *do* choose to evacuate, they will likely encounter these challenges and more. Disaster risk literature finds that when deciding whether to evacuate from a natural disaster, families consider the potential risks of *not* evacuating. In fact, this risk assessment is highly correlated with the ultimate decision about whether to leave (Thompson et al., 2017). An interesting consideration for families who have children with SPD is how they view the *risk of evacuating.* When making the choice of whether to stay or leave, does a parent consider the challenges, hardships, and risks of caring for a child with SPD during an evacuation and view these as significant barriers? Do these barriers negatively influence their willingness to evacuate? Research has not yet answered these questions. It has, however, shown that having a plan positively correlates with evacuating (Thompson et al., 2017), and this is an area where occupational therapy can play a significant role.

OTPs are better equipped than any other professionals to consider how a child's sensory processing patterns may be challenged during an evacuation and to help families make a plan to accommodate those needs while also seeking safe shelter during a natural disaster. Natural disasters are increasing in number and severity (Smith, 2023), yet there is little research detailing the impact of disasters on children with disabilities (Peek & Stough, 2010; Ronoh et al., 2015) and even less on children with SPD. It is imperative that OTPs apply our knowledge and skills to hypothetical evacuation scenarios and to help families prepare to relocate to safety. If OTPs are able to support evacuation planning, and these plans facilitate evacuation from disaster situations, they can save lives.

Applying the *OTPF-4*

My research has not turned up a specific framework for supporting children with SPD and their families in natural disaster preparedness; however, the *Occupational Therapy Practice Framework: Domain and Process(OTPF-4;* (AOTA, 2020) can be applied to meet this need. Using the *OTPF-4's* five aspects of the occupational therapy domain is an excellent way to consider how an evacuation might impact a child with SPD. See Table 1 for examples of this application.

Table 1. Aspects of the Occupational Therapy Domain

Occupations	Contexts	Performance Patterns	Performance Skills	Client Factors
• ADLs and IADLs • Health management • Rest and sleep • Educa-tion • Work • Play • Leisure • Social participation	• Environ-mental factors • Personal factors	• Habits • Routines • Roles • Rituals	• Motor skills • Process skills • Social interaction skills	• Values, beliefs, and spiritual-ity • Body functions • Body structures

Note. All aspects of the occupational therapy domain support engagement, participation, and health. This table does not imply a hierarchy.

- *Occupations*—What everyday activities will still be needed during an evacuation? ADLs such as eating and dressing will persist through an evacuation. Rest and sleep needs will also persist, and are likely to be challenged in unfamiliar settings. Play, as a child's main occupation, should continue through an evacuation and will likely require support.
- *Contexts*—It is obvious that many environmental factors will be significantly impacted during an evacuation. Anticipating some of the challenges presented and opportunities afforded by evacuation locations can help a family plan ahead to support their child. How might the child's personal factors, especially the ways in which their sensory needs are typically experienced, be challenged and addressed in an evacuation?
- *Performance Patterns*—Habits, routines, and rituals are often at risk during an evacuation. Yet for many children with SPD, these patterns are important contributors to health and well-being. Considering a child's typical performance patterns and planning to support them is imperative. For instance, a child who regularly needs intense proprioceptive and vestibular input before bedtime, or a child who requires an extended time and a calm environment in which to eat, will continue to have these needs through an evacuation period. How can the family plan to meet these needs at a shelter, hotel, family member's home, or other location?
- *Performance Skills*—How will a child's motor and processing skills impact their occupational performance during an evacuation? How might their social skills support or challenge a successful evacuation?

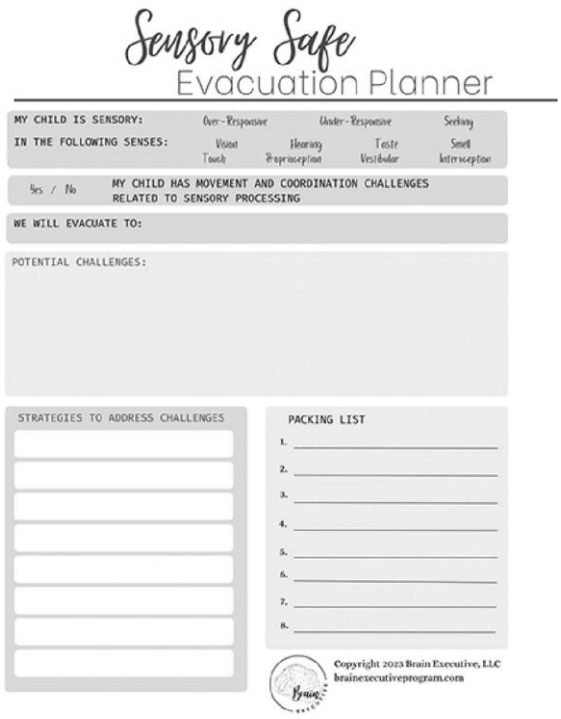
  Client Factors—How will the specific capabilities, characteristics, and beliefs of the child and the family influence evacuation? How can personal strengths be used to support the process, and how will challenge areas be supported?

Making a Plan: Minimizing Barriers and Supporting Safe Evacuations

Engaging individuals with disabilities and their families in disaster planning is a key component for improving outcomes (FEMA, 2023; NCD, 2006a, 2006b; WFOT, 2022). OTPs who are workinq with children with SPD and their families are poised to fulfill this role. Aqain, OTPs can turn to established

practice frameworks and apply them to meet this need. Caregiver coaching, which builds competence and supports caregivers in identifying challenges and engaging in problem-solving, is an ideal tool for helping caregivers prepare for an evacuation (Case-Smith, 2015). A simple worksheet can be used to guide this process during sessions to support caregivers as they engage in problem solving. Caregivers can take this hard copy of strategies with them upon evacuation. See Figure 1 for an example of a worksheet that can be downloaded for use (https://www.brainexecutiveprogram.com/evacuation-planner) or adapted by clinicians.

Figure 1. Sensory Safe Evacuation Planner



Conclusion

Research continues to highlight the importance of disaster planning, and this work is facilitated when OTPs incorporated it into practice. Addressing the needs of children with SPD-and their families-as they prepare for natural disasters can increase safety and even save lives.

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MENTAL HEALTH

Promoting positive mental health: Calming neurodiverse children's camp jitters

Tina Fletcher, EdD, MFA, OTR; Alicia Chen, OTD; and Edgar Pizarro, OTDS 11/01/2023

Camp is a special event in many people's lives. Children make friends and learn new things while parents enjoy a break from the vigilance required with children. Whether for a day or overnight stay, most people have happy memories of their experiences. Families with neurodiverse children might also see camp as a way for their child to dive deeply into preferred interests such as dinosaurs, outer space, or animals while in the company of others (See Figure 1). Some families, and even neurodiverse children themselves, might also take a deep breath and decide not to detail the camper's differences, hoping they will be accepted for who they are, despite any observable behaviors that seem out of the ordinary (Johnson & Joshi, 2016; Larson, 2010; O'Nions et al., 2017). Unfortunately, mental health challenges such as situational anxiety and fear can escalate as sessions wear on and may either make or break the camping experience. Positive mental health is not merely the absence of mental health challenges but something we all strive for to develop relationships, adapt to change, and cope with adversity (Galderisi et al., 2015). Counselors and campers can benefit from occupational therapy supports to increase the joy camp can bring.

Figure 1. When fantasy meets reality, self-regulation can be challenged

Note: Copyright Rose Rhodes. Used with permission.

What the literature tells us

Many factors influence successful camping for neurodiverse children. First, there is current interest in promoting differing manifestations of mental health and neurodiversity as a normal variant of the human experience. Over time, deficit-based models are giving way to strengths-based paradigms like Mad Pride and the Autistic Self-Advocacy Network. These groups conceptualize mental and other differences as a source of pride, and accordingly, hold that developing programming and environmental supports that incorporate children's differing skills instead of ignoring them can lead to more positive experiences (Armstrong, 2015; Hoffman, 2019).

Second, researchers led by Fort and colleagues (2016) determined that typically developing adolescents attending day camps changed their views of campers with disabilities when they were in equal power relationships, engaged in shared activities, and had fun together. In contrast to these encouraging discoveries, Eaton and colleagues (2015) found children with Tourette Syndrome experienced camp differently, depending on the presence of depressive symptoms prior to camp, and encouraged families to identify their child's needs to camp staff so they could be adequately addressed. If these needs are not met, depressed campers often experience peer rejection and victimization. The take-away message is that ignoring differences and hoping campers can forge their own friendships may be asking too much of them. Instead, promoting shared activities and providing guidance and mentoring regarding differing social and communication abilities are ways to help them build relationships.

While work on skill development can occur at camp, our goal is simply to provide supports for counselors and all campers, including children who are

neurodiverse (Brookman et al. 2003; Walker et al., 2010). Basic sensory, communication, and social adjustments can promote self-regulation and engagement, and reduce experiences of anxiety, depression, and alienation for all.

Our experiences with *turtle time*

Recently, a museum well known for its dinosaur-themed day camps contacted us for help. According to counselors, in general, two or three campers in each session did not behave as expected. While interested in dinosaurs and other experiences, they did not socialize well, resisted transitions and instructions, showed narrow snack preferences, and had behavioral outbursts. When parents were contacted, they usually opted to withdraw their camper, which was both a relief and a disappointment to counselors.

Camp classrooms featured wall-sized windows, concrete floors, and stainless-steel workstations. Acoustics were loud, with echoes and seemingly endless reverberations. After walking through the facilities and reviewing the schedules, the counselors and occupational therapy team agreed that structure was helpful to all the campers, but the physical layout of the education department provided sensory challenges. They agreed sensory breaks could help campers manage noise bombardment, and communications could be ramped up to help with routines and scheduling.

Our solution was to provide all campers with daily *turtle time*. This allowed them to spend up to 30 minutes underneath a collection of 10-foot-wide fiberglass turtle shells housed in exhibit storage . Turtle time was on-demand, meaning campers chose their time to visit the turtle shells. Campers could have their phones during turtle time. Counselors served as ticket takers, timekeepers, phone managers, traffic directors, and a friendly face to chat with. Turtle time was low-key, and counselors described their supervisory stints as refreshing.

Sensory supports. Turtle time spaces were customizable and had their own personalities. Staff safely secured shells to workbenches at varying heights, creating spaces featuring carpeted flooring that reduced sound, differing degrees of ambient lighting, cleanable bean bag chairs grouped in a variety of configurations, and choices of puffy or weighted blankets for neutral warmth and deep pressure touch. Laptops played a variety of genres of music and screen saver displays.

Social supports. As predicted, turtle time was seen in a positive light. Pressure for the camp director to provide structured educational time every minute of the day gradually yielded to including bits of down time. Counselors observed more spontaneous interactions between neurodiverse and typical campers during relaxed scheduling moments and with different bean bag chair configurations. Playing phone games with fellow campers became a favorite way to spend turtle time.

Communication supports. Rutherford and colleagues (2019) promoted *signposting* as a way of developing consistent and predictable communication supports across a variety of settings. In keeping with our plans to ease participation for neurodiverse campers, we embraced universal design for learning (UDL) for our own signposting. UDL promotes the practice of providing multiple means of engagement, representation, and expression for all (Carrington et al., 2020). At camp, UDL entailed using a variety of ways to communicate instructions, directions, and communications with graphic images, photographs, words in English and Spanish, and text.

We suggested counselors follow communication practices used by local schools, including the same software programs that augmented written communication with graphic images. This information was supplied by local special education teachers, and counselors readily adapted school-based wording for their activities. Soon, “kind hands and walking feet” became a familiar camp mantra.

Camp supports are successful in many facets of community life

Not every camp or community venue has a collection of oversized fiberglass turtle shells to accommodate campers’ needs, but other strategies are available. *Sensory havens* have found their ways into schools, sporting events, cultural activities, and treatment settings. Whether the desired outcome is calming, energizing, or self-regulating, effective spaces are based on delivering sensory input including vision, hearing, proprioception, deep pressure touch, and vestibular input. They provide what autism architect Mostafa (2014) conceptualized as *escape spaces* or *transition zones,* or ways to help campers recalibrate their senses and self-regulate behavior throughout their day. These spaces contribute to positive mental health as they promote a sense of well-being.

Portable escape spaces (see Figure 2) can easily become part of a camp program. Since they can be assembled anywhere, they provide the opportunity for neurodiverse children to be independent in using the space when they recognize emotional self-regulation or self-soothing is needed. A visit to a portable escape space provides a means for them to return to their summer camp experience to continue participating in productive activities and developing friendships.

Figure 2. A portable escape space

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In conjunction with community agencies, we have created portable escape spaces from ice fishing houses. They are portable, self-contained, quickly assembled, and easily stored. Spaces are set up with interlocking high-density foam floor tiles, rechargeable power sources to eliminate the need for electrical outlets, ventilation fans, light-emitting diode (LED) fiber optic displays, projected star arrays, hydraulic rocking chairs, white noise machines, weighted lap pads, and plastic squishy tiles serving as easily cleaned fidgets. Neurodiverse volunteers regularly collaborate with us to share perceptions of the ever-evolving spaces, and indicate they appreciate when spaces are customizable and allow flexible use.

The distinct value of occupational therapy in supporting healthy camp participation is in helping counselors understand how and why they can adjust routines and spaces by providing a variety of ways to communicate schedules, expectations, and activities; providing sensory havens or escape spaces to promote self-regulation and offer low stress opportunities to socialize; and helping develop strategies to promote interactions among neurodiverse and typically developing campers. Camp directors can consider the strategies for multimodal communication supports, flexible scheduling, and sensory havens or escape spaces as part of their toolkit to alleviate anxiety and fear and promote an inclusive and happy experience for all campers—and their counselors.

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Mental Health Special Interest Section

The Mental Health Special Interest Section (MHSIS) supports and advocates for occupational therapy practitioners, educators, and researchers working with individuals, groups, or populations across the lifespan in settings ranging from hospitals to schools and community programs who are at risk for or are currently diagnosed with a mental health challenge. The MHSIS values the centrality of occupation in the intervention process to prevent further illness, and promote performance, participation, quality of life, well-being, role competence and occupational justice.

- Chairperson, Carol Lambdin-Pattavina, OTD, MSOT, OTR/L, CTP
- *Quarterly* Editor, Andrea Thinnes, OTD, OTR/L, FNAP
- Learn more about the Mental Health Special Interest Section.
- Learn more about the *Quarterly*.

Enablers of Emergency Preparedness for People With Disabilities and Chronic Health Conditions: A Scoping Review

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PURPOSE: People with disabilities and chronic health conditions experience inequities in preparing for emergency situations caused by natural hazards, and have support needs that challenge their ability to shelter in place or evaluate to a safe place when an emergency occurs. Current emergency preparedness activities do not address the unique capabilities and support needs of people with disabilities. To support people with disabilities to participate in emergency preparedness activities and be prepared when disaster strikes, it is important to understand what enables people with disabilities and chronic health conditions to be prepared for emergencies caused by natural hazards. The purpose of this study was to compile and synthesize the available literature on what enables people with disabilities and chronic health conditions to prepare for emergency situations caused by natural hazards.

DESIGN: This scoping review sought to gather the available literature on emergency preparedness for people with disabilities across five databases (Scopus, Web of Science, PsycINFO, MEDLINE, CINAHL) using search terms for emergency preparedness and people with disabilities or people with chronic conditions. Inclusion criteria included that the article must be a peer-reviewed publication focused on barriers or enablers to emergency preparedness for community dwelling people with disabilities or chronic health conditions. The authors did not consider quality of reporting due to the scoping nature of the search.

METHOD: The search yielded 3237 studies which were review based on title and abstract. The full text of 171 studies were read, with 73 articles included in the final analysis. Data reduction began with data extraction of ideas related to barriers and enablers to emergency preparedness in each article. Analysis continued with reviewers using tables to group and synthesize similar concepts, and finally reviewers organizing the prominent findings across articles into four themes of knowledge, networks, actions, and advocacy.

RESULTS: To enable emergency preparedness, people with disabilities require knowledge of 1) how to prepare, 2) the natural hazards in their community, and 3) community resources; networks of others to support them in emergency situations; actions they can do to prepare; and advocacy to address unmet support needs. Individuals, organizations (such as home health providers), and communities have differing roles and opportunities to address emergency preparedness. The literature includes few studies contributing the voice and perspective of people with disabilities, and is largely deficit rather than capability focused.

CONCLUSION: The literature predominately focuses on how others can prepare for people with disabilities, rather than what enables people with disabilities to have the capability to prepare for themselves. Occupational therapists can support people with disabilities' emergency preparedness capabilities through collaborating with the person with disabilities, their families, and carers to: develop an emergency preparedness plan that addresses the person's capabilities and support needs, consider ways to expand their network in everyday life to increase potential network support in an emergency, and advocate for unmet support needs at the community, organizational, and policy levels. Emergency preparedness is an emerging area of practice for occupational therapists, and will be of increasing importance as the frequency and severity of emergencies caused by natural hazards increases with climate change. To effectively support clients, occupational therapists require tools that support addressing knowledge, networks, actions, and advocacy for emergency preparedness.

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DEVELOPMENTAL DISABILITIES

Disaster preparedness for people with developmental disabilities: Occupational therapy provides a path to readiness

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Occupational therapy practitioners (OTPs) can play a critical role in disaster preparedness for individuals with developmental disabilities (DD) and their families. Disasters, whether natural or human-made, can have devastating effects on lives and communities. It is essential to address the specific needs, abilities, and limitations of individuals with DD in emergency planning to ensure their safety and well-being (Subramaniam & Villeneuve, 2020). In collaboration with other professionals and organizations, OTPs can contribute to the IADL of safety and emergency maintenance, including disaster response and risk reduction efforts, promoting community resilience and positive well-being through meaningful engagement in occupation (American Occupational Therapy Association [AOTA]. 2017; World Federation of Occupational Therapists [WFOT]. 2014).

The role of OTPs in disaster preparedness encompasses several key responsibilities including assessment, individualized strategies, providing assistive devices, training and education, collaboration with key stakeholders, and rehabilitative reconnaissance to advocate for those who may have hidden physical or mental challenges.

Assessing individual needs

Assessing individual needs is a cornerstone of occupational therapy, especially in the context of disaster preparedness. OTPs conduct comprehensive assessments to gain a deep understanding of the unique requirements of individuals with DD. These assessments inform the development of personalized emergency plans that address clients' specific needs and abilities. OTPs play a pivotal role in formulating strategies tailored to everyone's unique requirements (Duque, et al., 2013). The comprehensive role of occupational therapy in disaster preparedness, response, and recovery further underscores the importance of these assessments, reinforcing that OTPs provide a deep understanding of the diverse challenges faced by individuals during disasters (AOTA, 2017). Such assessments not only focus on physical needs but also consider psychological, social, and environmental factors.

Developing individualized strategies

Developing individualized strategies is a fundamental aspect in the realm of disaster preparedness (Lindsay & Hsu, 2023). By synthesizing insights from comprehensive assessments, OTPs are equipped to formulate personalized emergency plans tailored to the unique needs and abilities of each individual, ensuring their safety, well-being, and active participation during crises. Hurricanes such as Katrina in 2005, Sandy in 2012, and Maria in 2017; and the recent wildfires in multiple U.S. states have emphasized the importance of individualized disaster management strategies (Jeung, Law, DeMatteo, Stratford, & Kim, 2015; Pizzi, 2015). For instance, the aftermath of Hurricane Maria and the subsequent earthquake emphasized the need for tailored interventions as the extent individual disability needs overwhelmed the disaster management teams (Lee, 2014). Additionally, the U.S. Army and U.S. Public Health Services branches of the military have leveraged occupational therapy's unique value through assessment of functional performance and the use of animal assisted therapy in disaster zones(Oakley, Caswell, & Parks, 2008; Smith-Forbes, Najera, & Hawkins, 2014). These strategies are meticulously crafted, considering various factors such as an individual's developmental level, communication skills, sensory sensitivities, motor abilities, and environmental adaptations.

Providing assistive devices and technologies

Providing assistive devices and technologies is a pivotal role of OTPs, especially in ensuring the safety and well-being of individuals with DD during emergencies. These devices, which can include communication aids, visual schedules, mobility devices, and adaptive equipment, are instrumental in facilitating evacuation, communication, and overall functioning during crises (Lee, 2014). Furthermore, the integration of innovative technologies, such as 3D printing, has opened new avenues for creating client-centered assistive devices, further underscoring the importance of technology in this field (Harada et al., 2022).

Training and education

Training and education are foundational components of the occupational therapy profession, particularly when it comes to preparing persons with DD and their support systems for emergencies (Lindsay & Hsu, 2023). OTPs are uniquely positioned to offer specialized training in disaster preparedness, given their expertise in functional assessments and interventions. This training encompasses a broad spectrum, from teaching essential safety skills to conducting evacuation drills. Moreover, OTPs provide crucial guidance on strategies to cope with sensory, mental, and emotional challenges impacting occupations of play, self-care, and social engagement (Dowdy et al., 2022: Rashad et al., 2022) that may arise during emergencies.

Collaborating with emergency response teams and key stakeholders

Collaboration with stakeholders is a common practice for OTPs. OTPs within school systems historically have been more familiar with the collaboration aspects of disaster preparedness through their contributions to emergency preparedness plans for individual students. Furthermore, OTPs provide consulting services for emergency preparedness plans for group homes, and home health OTPs participate in the OASIS safety assessment and intervention planning with clients (Skees Hermes, Schmitz, D'Amico, Gardner, & Asher, 2022). More OTPs are becoming actively engaged with emergency response teams, first responders, and local authorities to raise awareness about the unique needs of individuals with DD (Estes, et al., 2023). By leveraging their specialized knowledge and skills, OTPs provide invaluable insights, guidance, and training on how to effectively interact with and assist individuals with disabilities during emergencies.

Supporting post-disaster recovery: Rehabilitative reconnaissance

Following a disaster, OTPs play an indispensable role in the rehabilitation and recovery of individuals with DD. Their expertise is crucial in helping these individuals regain functional abilities, cope with trauma, and reintegrate into their communities through therapeutic interventions and support. AOTA and WFOT emphasize the importance of occupational therapy in disaster management, particularly in the post-disaster recovery phase, where OTPs can provide essential guidance and interventions tailored to the unique needs of affected individuals (AOTA, 2017; WFOT, 2014). Similarly, the World Health Organization (WHO) has highlighted the significance of rehabilitation services, including occupational therapy, in disaster settings to ensure that individuals with disabilities receive the necessary support to restore their functional abilities and improve their quality of life (WHO, 2016). AOTA, the WHO, and WFOT recommend advocating for marginalized and differently abled individuals during post-disaster recovery (AOTA, 2017; WHO, 2016; WFOT, 2014).

Disaster preparedness resources

Trusted resources are essential when it comes to disaster preparedness for individuals with DD. The organizations in Table 1 provide valuable information, checklists, and resources specific to disaster preparedness for individuals with disabilities.

Table 1 Disaster preparedness resources

Resource	Website
Pacific American Disabilities Act (ADA) National Network (Pacific ADA Network, 2023)	ADA National Network & Pacific ADA Center: Emergency Management and Preparedness: Inclusion of Persons with Disabilities
Ready.gov (managed by the U.S. Department of Homeland Security)	Plan Ahead for Disasters | Ready.gov
Substance Abuse Mental Health Services Administration (SAMHSA)	SAMHSA-Disaster Response Toolkit

Action steps for preparedness

When preparing for a disaster, individuals with DD and their families should consider key points related to planning and preparation, networking, communication, training, and regular reviews. Importantly, people with disabilities should be seen as key actors in reducing the risk of a disaster by being prepared (Pertiwi et al., 2019). These areas are described with detail in Table 2.

Table 2 Action steps for preparedness

Resource	Website
Pacific American Disabilities Act (ADA) National	ADA National Network & Pacific ADA Center: Emergency Management and Preparedness-Inclusion of Persons with

Network (Pacific ADA Network, 2023)	Disabilities
Ready.gov (managed by the U.S. Department of Homeland Security)	Plan Ahead for Disasters | Ready.gov
Substance Abuse Mental Health Services Administration (SAMHSA)	SAMHSA-Disaster Response Toolkit

Action steps for preparedness

When preparing for a disaster, individuals with DD and their families should consider key points related to planning and preparation, networking, communication, training, and regular reviews. Importantly, people with disabilities should be seen as key actors in reducing the risk of a disaster by being prepared (Pertiwi et al., 2019). These areas are described with detail in Table 2.

Table 2 Action steps for preparedness

Action	Description
Create an Emergency Plan	Develop a comprehensive plan considering the needs of the person with a disability. Include evacuation routes, meeting points, and communication strategies.
Build a Support Network	Connect with neighbors, friends, and community organizations. Inform them about the disability and specific needs for assistance during emergencies.
Communicate and Educate	Make sure all caregivers know the emergency plan and their roles. Educate them about the disability and any necessary accommodations.
Prepare an Emergency Kit	Assemble a kit with essential items like medications, equipment, batteries, food, water, and hygiene products. Include a list of contacts, medical records, and IDs.
Evacuation Planning	Identify accessible evacuation routes and shelters. If evacuation is needed, ensure the person with a disability has equipment and supplies, such as wheelchair or communication aids.
Communicate with Emergency Services	Notify emergency services agencies about the person with a disability and provide relevant information. Register for special assistance programs in your area.
Practice and Rehearse	Conduct regular drills and rehearsals of the emergency plan. Consider different scenarios and adapt the plan as needed.
Stay Informed	Keep updated on potential disasters and emergencies. Sign up for local alerts and warnings. Stay informed about resources for individuals with disabilities.
Document Important Information	Keep a file with important documents, medical details, contact details of health care providers, insurance information, and specific instructions related to the disability. Create digital copies for security.
Regularly Review and Update	Periodically review and update the emergency plan and supplies. Ensure the preparedness measures are up to date as needs and circumstances change.

It's important to note that each disability is unique, and the emergency plan should be tailored to meet the specific needs of the person with a disability. Consulting with other health care professionals, disability organizations, and local emergency management can help the family and community to be prepared prior to disaster.

Developing an emergency kit

In the aftermath of a disaster, it might take time for rescue workers or aid to reach affected individuals. An emergency kit ensures that essential supplies are available during this critical period. Despite recognizing the importance of an emergency kit, many individuals do not have one prepared (Schnall & Hanchey, 2023). OTPs can work with individuals, groups, and/or populations to create plans and kits to ensure the preparedness of clients with DD. Having an emergency kit with essential items helps individuals feel prepared and protected by knowing there's a plan and that their safety and health are prioritized based on their particular needs. This self-efficacy can promote a sense of control in an otherwise chaotic environment.

Creating an emergency kit is a crucial action step for all individuals; however personalized items should be considered for those with DD. It's important to regularly review and update the emergency kit to ensure that all items are current and functional. Additionally, involve caregivers, family members, and/or support professionals in the planning process to ensure the kit addresses the unique needs of the individual (Pertiwi et al., 2019). Here is an example of an emergency kit specifically designed for people with DD.

Case study

Courtney is a 25-year-old female with Down syndrome who lives with her family in Florida. She has a service dog, Jack, to keep her safe from seizures. She lives in an area where hurricanes are prevalent. In anticipation of hurricane season Courtney participated in a day program that was serviced by an occupational therapist. One of the events for the day program was a Hurricane Preparedness Education Day. Individual family plans were developed with the families and individual clients, including preparing, building go-bags, and developing an emergency response plan. Individuals were assisted to notify their respective utility companies and other city providers regarding their need for assistance with equipment or critical need for electricity. The community emergency response team (CERT) identified the community-wide resources and plans. The CERT had a subgroup of volunteers who addressed specialized needs of individuals with disabilities within the community. This created a safety network of support and communication.

With the help of the OTP, Courtney's family identified an accessible hotel that met their unique needs to support their ADLs and routines, along with creating go bags for themselves, Courtney, and Jack. They packed food, water, clothes, important documents, phone numbers, medications, cash, a radio, batteries, flashlights, comfort toys/activities for Courtney and Jack, phone chargers, phones, etc. Courtney was able to be part of this process, which reduced her anxiety when the family needed to evacuate from their coastal community and move inland to a hotel. Courtney brought her go-bag, and her family alerted their local emergency support services that they were leaving town, so the community network did not have to check on them until after the hurricane passed. They hunkered down at the hotel, which lost electricity but had a generator backup for the air conditioning and a food services area. The family managed well, and Courtney had no traumatic emotional experiences during or after the hurricane because they were prepared and connected to family and community services.

Conclusion

OTPs can play a vital role in disaster preparedness for people with DD and their families, guardians, and caregivers. By assessing individual needs, developing individualized strategies, providing assistive devices, conducting training and education, collaborating with key stakeholders, OTPs contribute to enhancing safety, independence, and overall well-being during emergencies. Key points for individuals and families include creating an emergency plan, building a support network, and staying informed through trusted resources.

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Developmental Disabilities Special Interest Section

The Developmental Disabilities Special Interest Section (DDSIS) focuses on how occupational therapy assessment and intervention can facilitate the inclusion of individuals with developmental disabilities across the lifespan in home, school, work, and community life. The DDSIS provides a forum for practitioners, educators, students, and researchers to exchange information and strategies and to network by highlighting best practice, current trends, and research updates.

- Chairperson, Sandra Rogers, PhD, OTR/L
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HOME & COMMUNITY HEALTH

Occupational therapy's role in disability-inclusive disaster risk reduction: Addressing the emergency preparedness needs of people with disabilities

Louis F. Dmytryk, OTD, OTR/L, RT (R) (ARRT) 11/01/2023

An increase in global catastrophes has drawn worldwide attention to the need for disaster mitigation at the community level (Mawardi et al., 2021). Disasters are classified as natural (e.g., hurricanes and floods), technological (e.g., building collapse and hazardous material spills), and intentional (e.g., active shooter incidents and hate crimes) (Smith & Scaffa, 2020). Research shows that people with disabilities are most at risk when confronted with disasters due to functional impairments (physical, sensory, cognitive, psychosocial) and a lack of emergency preparedness training (Engelman et al., 2022). This article proposes a disability-inclusive solution to conceptualize occupational therapy's role in disaster preparedness for people with disabilities.

The need for disability-inclusive disaster risk reduction

The American Occupational Therapy Association (AOTA, 2017b) envisions the profession as being equipped with population-based solutions to facilitate community participation in everyday living. In the aftermath of a disaster, people with disabilities may be vulnerable to participation restrictions because of an inability to access food, water, power, and medical care, rendering them dependent on community-based organizations to sustain life (Engelman et al., 2022). However, these challenges can be addressed by helping people with disabilities prepare for emergencies before they occur (Finkelstein & Finkelstein, 2020). Occupational therapy practitioners can facilitate this preparation using their knowledge of vulnerable population needs during routine and crisis times (American Occupational Therapy Association, 2017a).

When identifying individuals to assist people in preparing for catastrophic events, role determination should correlate with competencies in assigned tasks (Day et al., 2021). For example, emergency department nurses can provide disaster preparedness training in hospitals (Amberson et al., 2020) while law enforcement officers can enhance knowledge of threat detection in academic settings (Clark et al., 2019). Occupational therapy practitioners can help communities prepare for a crisis by teaching special needs populations how to create individualized disaster readiness plans (Smith & Scaffa, 2020).

Special needs populations have reported apprehension about their ability to maintain a balance between dependence and independence in times of emergency due to lack of preparation (Finkelstein & Finkelstein, 2020). In an emergency preparedness qualitative study on the perceptions and experiences of people with disabilities, Finkelstein & Finkelstein (2020) found that participants identified dependence on equipment to meet physical needs (respirators, electric wheelchairs, oxygen tanks) and people to maintain psychosocial connections (family members, social networks, emotional supports) as primary concerns during times of disaster. Worries such as these proved to be valid in Puerto Rico, where 50% of community-based organizations failed to train residents with disabilities to prepare for hurricane Maria, resulting in disproportional harm to special needs populations (Engelman et al., 2022). After studying the poor response, Engelman et al. (2022) recommended integrating disaster preparedness training for at-risk populations into emergency operation plans.

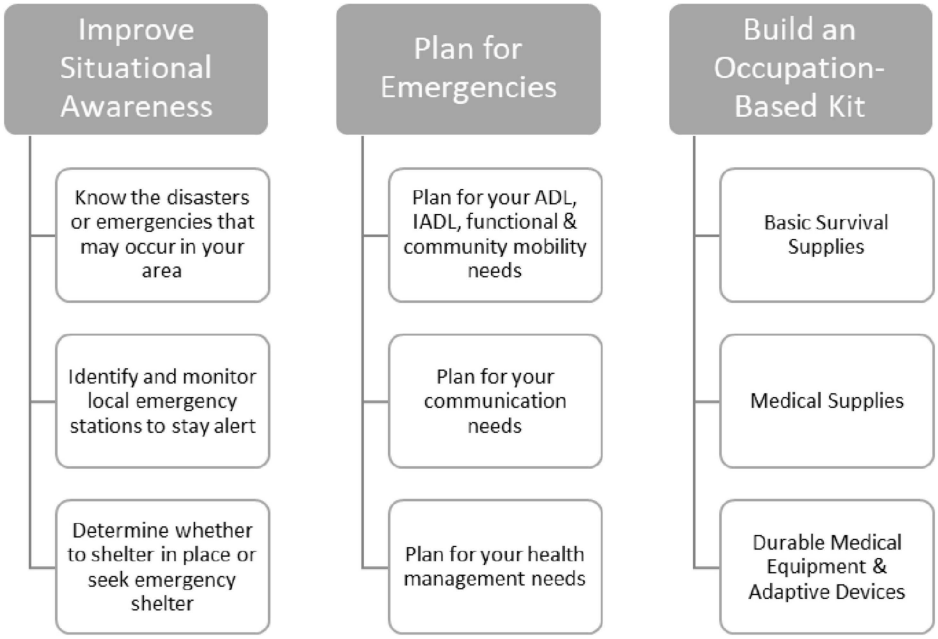
When planning for emergencies, a system-based approach is recommended to assist public health officials in gaining control of chaotic environments (Day et al., 2021). At the organizational level, conceptual frameworks that integrate disaster preparedness, early warning response systems, patient care, mass casualty drills, and human resource management have been proposed (Fraley, 2020; Mawardi et al., 2021). Models detailing individual dimensions of emergency preparedness to increase the personnel resilience of first responders have also been suggested (Day et al., 2021). However, specific models to conceptualize occupation-based strategies to meet the emergency preparedness needs of people with disabilities is lacking in the literature.

An occupation-based approach to emergency preparedness

The U.S. Department of Homeland Security (DHS, 2023) states that it is important for individuals with disabilities to consider their unique circumstances when planning for emergencies by getting informed, making a plan, and building a kit. To assist with the process, this author has organized the dimensions of emergency preparedness proposed by the government into a model that occupational therapy practitioners can use to assist clients in developing their own occupation-based emergency preparedness plans (see Figure 1). Perspectives from the American National Red Cross (2023) have been incorporated into the model to further delineate steps that vulnerable populations can take to prepare for disasters. The intent is to provide

occupational therapy practitioners with a systematic approach to inclusive disaster-risk reduction for their clients.

Figure 1. Occupation-based emergency preparedness model for people with disabilities



Improving situational awareness

Situational awareness represents knowledge of potential incidents that is gained by gathering information, understanding what has been collected, and anticipating hazards that pose risks (National Fire Chiefs Council, 2023). To improve situational awareness, DHS (2023) and American National Red Cross (2023) recommend learning about emergencies that may occur in communities and identifying how local authorities will notify residents about them. People with disabilities value this information and prefer obtaining it from trusted government sources in a manner that they can understand based on their abilities (Elisala et al., 2020). State and local government emergency management websites provide community-risk assessments with instructions on signing up for warning systems that alert residents to shelter in place or evacuate to designated areas (Federal Emergency Management Agency [FEMA], 2020). Occupational therapy practitioners can make clients aware of these resources, assist them in registering for notifications, and clarify any misunderstanding by using a health literacy approach to plan for emergencies.

Planning for emergencies

The occupational profile is used to gather information about a client to plan for their ADL, IADL, functional, and community mobility needs (AOTA, 2020b). When planning for emergencies, attention should be given to safety and emergency maintenance by assessing situations that pose threats and the capacity to respond to them. Barriers to disaster preparedness vary by disability but may include an inability to evacuate without assistance, communicate needs, and understand what is going on (Elisala et al., 2020). To counter these hinderances, it has been suggested that people with disabilities build emergency survival kits with items that meet their individual needs (DHS, 2023).

Building an occupation-based kit

Disaster kits should include basic survival supplies (Engelman et al., 2022) such as 72 hours worth of food, water, and medications; a battery-powered radio; and a flashlight with extra batteries (Shepherd Center, 2018). Medical supplies may include a list of prescription drugs with dosage and frequency, allergies, diagnoses, eyeglasses, hearing aids, batteries, backup oxygen supply, and copies of insurance with contact information of physicians and health care proxy (DHS, 2023). Durable medical and adaptive equipment should also be included, with the style and serial numbers of devices along with operating instructions for caregivers (DHS, 2023). Additional items may include an extra set of clothing packed in a waterproof bag with a grooming and hygiene kit for self-care.

Application to practice

The following case study illustrates how the Occupation-Based Emergency Preparedness Model for People with Disabilities can be applied in home health to a client with hearing and mobility impairments residing in a hurricane-prone area. To improve situational awareness, the client is shown how to access the FEMA's hurricane webpage which explains how to prepare by knowing the evacuation zone, recognizing warnings, and signing up for National Weather Service alerts (DHS, 2022). To plan for the client's ADL, mobility, and communication needs, the occupational profile is administered, which

reveals that the client is independent with self-care at the wheelchair level and communicates by sign language. The client is instructed on how to build an occupation-based kit with 72 hours' worth of water and food bars, flashlight, weather radio (with text display), blanket, hooded poncho, and hygiene set (shampoo, shaving cream, razor, sanitary napkins, toothbrush, toothpaste, soap, facial tissues, moist towelettes). Medical supplies include a portable first aid kit, prescription drugs with medication list, and contact information of health care providers. Phone numbers of social contacts such as family, friends, health care proxy, and caregivers is also included. A pen and notepad are added to help the client communicate with someone who does not know sign language. The client is advised to obtain an alert tag or bracelet, add medical information to their smartphone, and carry a printed card to communicate their disability to first responders. Purchasing a backup lightweight manual wheelchair with seat cushion is also suggested. As a result of these emergency plans, the client feels prepared to respond if a hurricane occurs in their area.

Conclusion

Occupational therapy practitioners are obligated to promote equity and inclusion in practice to ensure the fair, equitable, and appropriate treatment of all clients served (AOTA, 2020a). The disability-inclusive disaster risk reduction strategies proposed in this article safeguard the ethical principle of justice by addressing the unique needs of people with disabilities who are often excluded from emergency planning. The Occupation-Based Emergency Preparedness Model for People With Disabilities can be easily integrated into community-based practice by offering an organized way of preparing citizens for disasters regardless of disability or geographic location. This will help to strengthen the response and resilience of special needs populations when confronted with societal threats.

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Home & Community Health Special Interest Section

The Home & Community Health Special Interest Section (HCHSIS) provides resources and support for occupational therapists and occupational therapy assistants who provide services in the home and community. Examples include home health, adult day services, senior housing, wellness programs, community mental health centers, home modification, and accessibility consultation. The HCHSIS also includes the Home Modification Network.

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Research Article

Participation in Everyday Occupations Among Rohingya Refugees in Bangladeshi Refugee Camps

Yeasir A. Alve, Azharul Islam, Brittany Hatlestad, Mansha P. Mirza

Importance: Bangladesh hosts a large number of Rohingya refugees from Myanmar. Living in refugee camps, the Rohingya refugees face challenges in everyday occupations because of violence, limited opportunities, and corporal punishment by the community.

Objective: To explore how Rohingya refugees experience participation in everyday occupations while living in temporary refugee camps in Bangladesh.

Design: Phenomenological study to describe, understand, and interpret the meanings of life experiences in particularly adverse conditions.

Setting: Rohingya refugee camps in Bangladesh.

Participants: Fifteen purposively selected participants from the camps.

Outcomes and Measures: In-depth semistructured interview, as well as participant and environmental observations. Researchers used line-by-line data analysis to capture quotations and patterns using interpretive phenomenological analysis, which included establishment of initial codes, interpretation, determining selected codes, and categorization.

Results: The research identified four major themes—(1) mental stress, sleep disturbances, and daily occupations; (2) adjustment to inconsistent daily activities; (3) complex relationships and limited social roles that decreased occupational engagement; and (4) involvement in precarious occupations that exacerbated severe health risks—and four subthemes—(1) fragmented family relationships, (2) formation of new relationships to perform social roles, (3) inconvenient and inaccessible living conditions, and (4) continuation of unlawful work to survive.

Conclusions and Relevance: Rohingya refugees should receive comprehensive health and rehabilitative care because of their perilous mental health conditions, precarious occupations, and lack of trustworthy relationships with family and neighbors.

What This Article Adds: Rohingya refugees experience imbalanced, deprived, and maladapted occupations in refugee camps. Suggestions to improve their lived experience with further peer support programs may help them participate in occupation-based rehabilitation services to facilitate their social integration.

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Rohingyas are considered an ethnic minority, and they represent the most notable percentage of Muslims in Myanmar, with approximately 1 million living in Rakhine State at the beginning of 2017 (Institute of Medicine, 2021). Beginning in the 1990s and escalating in August 2017, Rohingya women and girls have been raped and abused, numerous Rohingya civilians have been killed, and their villages have been burned during military attacks by local Buddhist mobs. The Myanmar government refuses to grant the

Rohingya citizenship, and as a result most of them do not have any legal documentation, effectively making them stateless. Because of the severe political and religious violence, almost 800,000 Rohingyas have crossed the border between Myanmar and Bangladesh since the 1990s (Leidman et al., 2018). In May 2018, the World Health Organization (WHO) reported that the Rohingya displacement camps in Bangladesh required about $950 million in funding, but at that time only 6.3% of the targeted health-related funding had been met (United Nations, 2018). This limited access to critical and lifesaving services, such as food, drinkable water, shelter, and health care, turned into a severe humanitarian crisis (Ahmed et al., 2018). In addition, overcrowded makeshift huts have challenged existing health care facilities. These challenges are exacerbated by frequent environmental hazards, such as landslides and flooding, that affect ongoing humanitarian responses. Insufficient resources in the Rohingya camps drew international attention to the everyday health care needs of Rohingya refugees.

The environmental stressors in Rohingya camps, and their impact on everyday life, have not yet been thoroughly researched in Bangladesh (Chynoweth et al., 2020). As a consequence, there is a need to better understand how Rohingya refugees in Bangladesh participate in their everyday occupations despite the health-related consequences of persecution, war, and historical trauma, as well as daily environmental stressors associated with living in temporary shelters at different camp locations. It is also important to understand how participating in everyday occupation influences health and quality of daily life. This knowledge is essential if effective health care and rehabilitation support services in temporary living shelters of refugees, in particular in Bangladesh, are to be developed.

Previous research with Rohingya refugees has identified a correlation between restricted participation and posttraumatic stress disorder (PTSD), anxiety, and depression (Doherty et al., 2020). Research has found that mental health conditions challenge a person's ability to participate in everyday life (Riley et al., 2017), yet existing essential rehabilitation services in Rohingya refugee camps include screening for only basic health conditions and have failed to address comprehensive mental health and occupation-based care (Khan & Haque, 2021). Additional care services, such as donating blankets or food relief, assisting women with pre- and postnatal care, or providing stoves to decrease air pollution, are offered by charitable organizations. The Bangladeshi government has demonstrated limited health care capacities, with minimal action taken to improve living conditions inside Rohingya camps (Fischer et al., 2021).

The existing literature also shows that Rohingya refugees face challenges in everyday occupations because of violence, limited opportunities to manage everyday needs, lack of proper hygiene, malnutrition, and continuous physical and sexual harassment by neighbors and local community members (Wali et al., 2018). Given such conditions, it is essential to further understand how Rohingya refugees participate in everyday occupations and how they address occupational changes to promote their overall health and well-being. It is also important to note that existing research with Rohingya refugees has not been conducted from an occupational therapy perspective. Occupation-focused research may enable occupational therapy practitioners to offer more impactful and meaningful care for refugees living in displacement camps in an environment with limited resources. Evidence to inform occupational therapy's contribution to refugees living in low-resource environments during a humanitarian crisis is limited. More research can help identify the support needed for people experiencing long-term displacement to enable them to resume previous occupations and establish new ones within their current environment.

The purpose of this study was to explore how Rohingya refugees experience participation in everyday occupations while living in Rohingya camps in Bangladesh. In this study, *participation* is the term we use to define the meaning of perceived engagement in everyday occupations. The WHO (2022) defines participation as involvement in life situations. The *International Classification of Functioning, Disability, and Health* (*ICF*), created by the WHO, serves as a framework for conceptualizing participation, health, and disability at both the individual and population levels. The *ICF* further categorizes participation into five domains: (1) self-care (activities of daily living); (2) domestic life (instrumental activities of daily living); (3) interpersonal interaction and relationships (social participation); (4) major life areas (education and work); and (5) community, social, and civic life (play, leisure; Boyt Schell et al., 2014). Although such categories can serve as conceptual boundaries for research involving Rohingya refugees' participation in daily occupations, it should be noted that the subjective meaning of participation is missing from the *ICF* (Hemmingsson & Jonsson, 2005). Previous research has highlighted the importance of acknowledging the links among subjective experiences of participation, health, and well-being (Pendleton & Schultz-Krohn, 2013). To emphasize this link, participation in the current research also encompasses subjective and passive participation (e.g., observing others, receiving care, and listening) to capture a holistic understanding of how Rohingya refugees experience participation in everyday occupations while living in refugee camps.

Research Questions

We explored the following three research questions: (1) How do Rohingya refugees experience daily life while living in refugee camps in Bangladesh, (2) what daily occupations do refugees participate in, and how do they make sense of these occupations, and (3) what

environmental factors do refugees perceive as supporting or hindering their engagement in daily occupations?

Methods and Materials

Research Design

We used the phenomenological method, which entails application of hermeneutics and selection of participants who have lived experience of the social phenomena of interest, who are willing to talk about their experience and related personal meaning, and who are diverse enough from one another to enhance the possibility of rich and unique stories of their particular experience (Rodriguez & Smith, 2018). Specific social phenomena of interest include the beliefs, interactions, and functions of Rohingya refugees that involve the family and other people in a crisis.

Researcher Positionality, Roles, and Power Dynamics

The first author (Yeasir A. Alve) is a Bangladeshi occupational therapist who has supervised the fieldwork of occupational therapy interns in marginalized communities and coordinated this research project. The second author (Azharul Islam) has 1 yr of experience working in various refugee camps, and the third author (Brittany Hatlestad) is a graduate research assistant who provided assistance in the process of research analysis. The fourth author (Mansha P. Mirza) is an occupational therapist and seasoned researcher with more than 15 yr of experience doing research and community service with refugee communities. Data collection for this study was primarily conducted by Islam under Alve's guidance and supervision. Data analysis was conducted collaboratively between Islam and Alve, and Hatlestad and Mirza helped with the organization of themes and the development of the study's implications. All four members of the research team approached their roles and this study with a firm belief that all persons are entitled to human and occupational rights. None of the authors has personal refugee experience, although Mirza has a family history of displacement and refugeehood. All authors acknowledge their privilege as professionals with freedom of mobility and a steady income. During fieldwork, steps were taken to ensure that the resulting power differential between the researchers and the study participants did not coerce or further marginalize the participants. For example, the interpreters in this study were persons with personal refugee experience who had lived in a refugee camp for many years. Their involvement reduced the power imbalance that inherently existed between researchers and participants and created a dynamic that invited participants to express their views freely.

Participants

The participants, people who live in the Rohingya camps, were selected through a heterogeneous sampling strategy (Patton, 2002). The Bangladeshi Office of the Refugee Relief and Repatriation Commissioner approved the research ethics and safety guidelines for conducting this study (Approval No. 2018-2077). The Bangladeshi government granted permission to access refugees from three designated Rohingya camps. Participants were recruited from these camps on the basis of the following inclusion criteria: (1) adult refugees between ages 18 and 60 yr, (2) a minimum of 6 mo to a maximum of 2 yr of living in Rohingya camps, and (3) cognitive capacity to respond to questions during the interview. The specific time frame of 6 mo to 2 yr was selected because that is when displaced people experience the most challenging events, engage in self-reflection or dialogue with themselves, and begin to make decisions that affect the rest of their lives (Davies, 2005). Participants were excluded if they (1) had communication difficulties due to any speech disorders or notable cognitive impairment or (2) had permanent residency in the host country and lived in settings other than the three designated camps. Acting as research collaborators, the data collector (Islam) and native Rohingya interpreters received training from Alve to ensure personal, research participant, and environmental safety during interviews. The first two interpreters who responded to a job ad posted in the camps were selected on the basis of the following inclusion criteria: (1) were natives of Myanmar who evacuated to Bangladesh in 1990; (2) had a legal refugee card that allowed them to visit different camps, humanitarian organizations, and the local community; and (3) were older refugees (age ≥60 yr) with long-term refugee camp experience and consequently had developed skills to minimize any emotional or behavioral consequences during the interview.

Recruitment involved two components: (1) building rapport between the researchers and the potential participants through native interpreters and (2) screening potential participants. In qualitative research, native interpreters are commonly used to efficiently understand specific local languages (Schweitzer & Steel, 2008). To recruit participants, the person in charge of the camp shared the data set of 80,000 Rohingya refugees who lived in the research-permitted camps. On the basis of inclusion and exclusion criteria, the research collaborators identified 10 potential refugees from each camp. They then narrowed the total number of candidates to 20 by prioritizing the heterogeneity of sociodemographic characteristics, such as different gender, living areas, marital status, and types of a family (e.g., two-parent vs. single-parent households). At the initial meeting with participants, the research collaborators emphasized that participation was voluntary, that pseudonyms would be used to ensure anonymity, and that participants would be able to withdraw from the study at any point in the process. After the collaborators received verbal and written consent from the 20 initial refugee participants, the

first interviews started. Three candidates withdrew at the time of the second interview and requested that their information be removed from this research. Two other participants were not available during the daytime or while the research collaborators visited their temporary living shelters. The characteristics of the final 15 participants are presented in Table 1.

Data Collection Procedure

Data gathering consisted of two interviews with each participant and additional observations to help us better understand the local context through a cultural lens. Two interviews were deemed appropriate to allow for building rapport and collecting foundational data during the first interview and for asking follow-up and clarification questions during the second interview. Islam conducted semistructured, in-depth interviews developed from guidelines outlined by Smith and colleagues (2009). He speaks the Chittagonian dialect, which matches 90% with the Rohingya language; however, the accents are different. Although familiarity with 90% of the vocabulary of a language is substantial, it may lead to some information being missed; thus, interpreters were used to fully comprehend the meaning of participants' responses, including their local jargon. Questionnaires were developed in Bengali and later translated into the Chittagonian dialect by Islam and the interpreters. All interviews took place at each participant's shelter. The interpreters initiated the first interviews, and the participants were asked to describe their experiences through an initial open-ended question: "Can you please tell me about daily life activities that you are doing in your small shelter?" Participants then were encouraged to expand their explanations through semistructured questions (see the Appendix). The interpreters explained Islam's questions to the participants and summarized the participants' answers for him while providing an additional explanation for unclear jargon or meaning. This helped clarify responses for Islam, who understood the local language, with the exception of some jargon. Because the interpreters translated and clarified the meaning of any jargon in the presence of the participants being interviewed, this process verified the accuracy of translation and helped avoid misinterpretations.

In the second interview, the participants were requested, while respecting their personal and religious dignity, to show, explain, and demonstrate their daily living activities inside and outside the temporary shelters. Islam conducted both participant and nonparticipant observations of these activities using a structured guide that included cues to capture the physical and social environments (see the Appendix). He also informally communicated with other family members and neighbors, when participants granted permission, to obtain additional perspectives that could shed more light on the participants' statements. With multiple generations of family members living in the same shelter, some participants asked to discuss certain topics, such as experiences of domestic violence, a

Table 1. Participants' Sociodemographic Information

Pseudonym	Camp	Age, yr	Sex	Diseases	MS	EQ	NFM	Past Occupation	Present Occupation	MIP
Selina	B	26	F	None	Married	G-2	4	Housekeeping	Housekeeping	Husband
Ali	B	52	M	LBP	Married	G-4	7	Farming	Paid volunteering	Self
Begum	B	19	F	No	Single	I	3	Housekeeping	Housekeeping	Brother
Akbor	C	30	M	No	Married	G-6	8	Shopkeeping	Nil	Nil
Salam	A	29	M	No	Married	I	9	Farming	Nil	Nil
Banu	B	24	F	LBP	Single	I	5	Housekeeping	Housekeeping	Father
Julekha	C	35	F	Anemia	Married	I	5	Farming	Housekeeping	Husband
Roshida	A	40	F	No	Married	I	10	Housekeeping	Housekeeping	Husband
Nazma	B	30	F	No	Married	I	5	Day labor	Housekeeping	Husband
Lipi	B	30	F	RA	Married	I	7	Housekeeping	Housekeeping	Husband
Motin	A	31	M	JP	Married	I	9	Farming	Nil	Nil
Barek	A	55	M	No	Married	G-4	8	Doing business	Doing business	Nil
Rasel	C	25	M	LBP	Married	G-6	4	Farming	Studying	Self
Bilkis	C	52	F	OA	Widowed	I	6	Housekeeping	Housekeeping	Son
Sojib	B	30	M	RA	Married	I	5	Farming	Nil	Self

Note. EQ = educational qualification (for Rohingya people, elementary school = Grades 1–5, high school = Grades 6–10); F = female; G = grade; I = illiterate; JP = multiple-joint pain; LBP = mechanical low back pain; M = male; MIP = main income person; MS = marital status; NFM = number of family members; Nil = no significant occupation during the interview; OA = osteoarthritis; RA = rheumatoid arthritis.

spouse's extramarital relationships, or unauthorized work, privately, outside the living shelter.

The two interviews were conducted between November 2019 and January 2020, and each interview took 1 to 2 hr. Data were recorded using an IC Recorder (Sony PX470), and field notes were recorded to capture participants' actions, expressions, and gestures (Sutton & Austin, 2015). Islam and collaborators separately transcribed interviews verbatim in formal Bengali language. Alve resolved the dissimilarities through conversations with Islam and the collaborators in February 2020.

Data Analysis

Interpretive phenomenological analysis (IPA) involves the authors' sustained engagement in an interpretative relationship with the transcripts and field notes to capture and do justice to the participants' experiences in their mental and social worlds. The flow of data analysis followed the IPA's six-step guideline, with flexibility (Smith & Nizza, 2021). The process of interpretation adopted line-by-line analysis to capture quotations and patterns that depicted experiences of participation in daily occupations. Participant experiences were translated to English and are quoted in this article using pseudonyms. All captured quotes were termed, collectively, *initial codes.* First, Islam transferred all initial codes to an Excel file, after which he and Alve read the initial codes separately to interpret the meaning of each code. This interpretation process involved supporting documents, such as field notes and notes from observations. The notes helped contextualize participants' verbal comments; illustrate participants' facial expressions and nonverbal language; and emphasize particular phenomena, such as a feeling of stress because of an unexpected routine or an embarrassment because of involvement in unlawful activity.

After interpreting the meanings of the codes, Alve and Islam engaged in an analytic discussion to eliminate any confusion. The mutual coding process determined a total of 22 selected codes by comparing each participant's quotations. To aid in categorization, Islam assigned an operational definition to each selected code that was based on the initial codes and quotations. For example, a selected code "feelings of insecurity" was assigned the operational definition "anxiety regarding everyday goals, lack of confidence to maintain relationships, and inability to handle the crisis." Alve revisited all the draft categories that were derived from the 22 initial codes. Further discussion with Hatlestad and Mirza resolved any remaining disagreements regarding coding and the process of categorizing codes. By comparing the codes and categories, we identified four initial themes, two of which could be further categorized into two subthemes each.

Trustworthiness and Rigor

Strategies outlined by Koch (2006) were used to ensure research quality, consistency, and structure. Islam conducted pilot interviews with two potential participants before commencing formal data collection to modify the interview and observation guides as needed. To establish credibility, interviewers kept field notes during the first and second interviews to record experiences while asking questions and observing everyday occupations in the participants' natural environment. The research collaborators transcribed, encoded, and analyzed all the data separately in interpreting study findings.

After completing the data analysis, Islam and the interpreters executed member checking and ensured that the draft themes and categories represented the participants' voices. The interpreters met with the participants and shared all anonymous and individual quotations connected to the drafted themes and subthemes in the form of a flyer. Over the course of the data collection, one-third of the participants were relocated to different refugee camps, and it was challenging for interpreters to locate them. Most of the participants gave their approval of the themes and subthemes. Others disagreed and offered suggestions for potential edits to more accurately reflect their lived experience. Thus, the categories were reevaluated and edited on the basis of the participants' opinions regarding the themes and subthemes, which ultimately enhanced their trust in the research process. The dependability of the research was increased because two authors were separately involved in the initial coding process, and consultation with Hatlestad and Mirza helped conceptualize the categorization and theme making. In addition, reflexivity helped bring forth any preconceptions that entered the analysis. For example, the back-and-forth process of identifying themes, categories, and initial codes throughout the analysis resulted in a more authentic reflection of experiences shared by the participants.

Results

On the basis of the findings, we identified four notable themes that characterized participation in everyday occupations among Rohingya refugees: (1) mental stress, sleep disturbances, and daily occupations; (2) adjusting to inconsistent daily activities; (3) decreased occupational engagement due to complex relationships and limited social roles; and (4) involvement in precarious occupations that exacerbated severe health risks.

Theme 1: Mental Stress, Sleep Disturbances, and Daily Occupations

Mental health conditions, such as anxiety, depression, PTSD, restlessness, and suicidal ideation, negatively affected sleep routines, which in turn hindered participants' ability to take part fully in daily activities. Participants engaged in several adjustment strategies, such as modifying routines and spiritual healing, in an attempt to address these problems.

Past incidents, such as human trafficking and genocide, were experiences that interfered with peaceful sleep and rest. Participants mentioned difficulty

sleeping at night. The concerns they expressed included sudden wakefulness, wild laments, crying, unusual sweating, and frequent thirst. Participants themselves, or their families, had previously experienced physical torture, such as hearing and seeing weapons being fired, witnessing murders or rapes, and other experiences that eliminated peaceful rest. Participants felt panicked or upset every night and frequently became sick. As a result, sleepless nights interfered with daily occupations, as evidenced by this quote from Begum:

> I often dream that some bastards are raping me forcefully, crying loudly, and no one came to [my] rescue. . . . I sweated after this nightmare and cried the rest of the night. This situation has devastated my intentions to pay attention to daily activities.

This quote expresses the intensity of suffering after Begum had crossed the border. She did not feel safe in the temporary living shelters. Another participant, Banu, stated being afraid of some people who always peered at her in an inappropriate way: "Some men looked like they were raping me with their eyes. I feared, became restless, and could not pay attention while cooking. . . . Most of the time, I forgot about the sequence of steps to make a meal."

Banu had difficulty trusting anyone after her experience of genocide in Myanmar, which affected her relationships. She mentioned that her older sister had been raped by eight adults, one after another, and had died before she crossed the Myanmar border. Banu had not experienced deep and restful sleep since she fled.

Like Banu, Ali experienced restless sleep interrupted by mistrust and insecurity: "Look, I have some valuable stuff [shows a gold necklace] here [in his shelter]. I am always afraid of someone stealing my wealth and cannot sleep at all because of a lot of negative thoughts." As he spoke, he was repairing a fishing net and lost the sequence.

Ali experienced insecurity that was due to his desire to protect his family from snatching (kidnapping) or robbery and was concerned about his adolescent daughters' safety. He never allowed them to go anywhere alone, and he did not sleep at night as a way to protect them.

For other participants, like Akbor, natural hazards, such as heavy rain, flash floods, and landslides, perturbed their rest and sleep:

> Look at the slopes of the hill [because of heavy rainfall, the shelters are vulnerable to being buried by landslides]. We are vulnerable to landslides in this monsoon period. I am very anxious to sleep underneath these hills, and the shelter is not strong enough to protect [against] the wind speed. I completely lost interest in living here.

After sharing this, Akbor took a break from the interview.

Participants often went to bed fearful about what was to come the following day. The lack of peaceful sleep and rest caused them to remain upset throughout the day; lose social connections; become disinterested while performing personal, household, and social responsibilities; and be physically unwell. Complicated daily living activities, such as washing clothes (scrubbing, rinsing, and drying clothes manually), cooking (using firewood), bathing children (using a manual water pump), and regular personal hygiene were intentionally overlooked. Because of their restlessness, the participants would quickly become fatigued and thus would put off daily activities on purpose. For example, Sajib, another participant, said that he takes a shower once a week. Overall, the restless and sleepless nights resulting from mental stress and sociocontextual situations prevented participation in everyday activities.

Theme 2: Adjusting to Inconsistent Daily Activities

Inconsistent daily activities created unique everyday routines. Participants used spiritual healing skills to adapt to the constraints and created a routine in daily activities. Most of the time, female participants collected relief supplies (e.g., rations, kitchen items, fuel) instead of their husbands. The male wait line was longer than the one for women, and men were occupied with income-generating work outside the camps, which was often conducted illegally. Despite the shorter lines to obtain relief supplies compared with men, women had difficulty maintaining daily routines and caring for others because of the time commitment associated with collecting necessary supplies and caregiving responsibilities for children, parents-in-law, and younger siblings. Making eye contact, and speaking boldly, Julekha shared the following:

> The ration collection line was hectic and time consuming, preventing returning home early. As a result, the baby stays hungry, and the partner does not have lunch at the proper time. Most of the time, he does not have lunch and stays hungry. How stressful it is! . . . These days, I get up before sunrise to prepare everyone's food and bring the baby outside in a backpack.

The women took on additional family and household responsibilities, which created extensive hardship and mental and physical tiredness, especially in extreme weather. The hardship presented physically, through muscle and joint pain around the neck, shoulders, wrists, and heels. Nevertheless, women continued to uphold their duties, even if their extended family responsibilities resulted in their own inconsistent daily routines. During time that should be their rest period, women were noted to complete light chores and chat with family members, direct children's home education, prepare meals, and oversee household items. Lipi started crying after providing this description:

> Once, we strived for food when I had a fever, and my partner went fishing in the deep sea without any

return notice; there was no one to cook food. . . . I was shocked, messed up, and unable to help. I did not find any meaningful work except praying to God to save my family.

The lack of financial resources in the Rohingya camp limited access to camp-based health care, delivery items, and means of livelihood for those waiting for their refugee identity cards. Refugee participants had much more freedom to access natural and aquatic resources in Myanmar; however, in Bangladeshi refugee camps they were living under conditions of confinement, with limited access to natural resources. Participants reported practicing spiritual activities to adjust to the agitated mindset and uncertainty that accompanied daily activities. As one participant, Roshida, proudly explained, these spiritual activities included praying on time; reciting passages from holy books; and discussing the tragedy, patience, and virtue of their holy prophets:

> We have 10 family members in our shelter, and I lose almost all energy in the middle of the day by taking care of children and parents. . . . I found that God is healing me after practicing five-times prayers every day. . . . I do not know how did I get the bits of patience to manage everything.

Overall, participants balanced everyday occupations in their hostile sociocultural environment through adaptation, alteration, and spirituality.

Theme 3: Decreased Occupational Engagement Due to Complex Relationships and Limited Social Roles

Participants mentioned complex relationships, such as mistrust of a spouse, other family members, or neighbors, that affected their ability to perform social functions. Fragmented relationships decreased motivation to care for the self and others, but this could be solved by forming new relationships and making connections in shared roles.

Subtheme 3.1: Fragmented Family Relationships

Participants had been separated, intentionally or unintentionally, from family members and relatives after arriving in Bangladesh. They mentioned a sense of disconnection because they lived in different camps, and the lack of cellular phone coverage limited their ability to communicate with others. It was a helpless situation because the neighbors did not like to talk with one another because of mistrustful attitudes that influenced personal and interpersonal relationships in the camps. Mistrustful attitudes were expressed by using an additional lock on one's belongings, counting savings repeatedly or suspiciously, refraining from borrowing money, and keeping a sharp object or a stick to protect the self in case of any unwanted situation. Most of the participants had previously been in a joint, extended family; therefore, their communal roles were affected after transitioning to the refugee camps. Motin, speaking boldly, shared this information:

> I took all of the caregiving responsibilities of my father after he had a stroke. . . . I lost interest in communicating with siblings because they escaped from their duties to parents. . . . If my family members can't be trusted, how could neighbors be trusted? I learned how to live alone.

The participants also mentioned how poverty affected their relationships with their spouses. Some of them were involved in extramarital relationships because their spouse was unable to provide money or food or did not fulfill specific personal and family needs, such as gorgeous dresses, children's fancy foods, or certain groceries. Extramarital relationships with the authorities were helping some people receive valuable gifts and facilitated affluent living, despite the negative effects on their relationships with family members. In such cases, misunderstandings arose between couples, worsening the marital relationship and causing an imbalance in their mutual roles. With eyes cast downward, Sojib described his situation:

> Once, I could meet the family's needs, but now, my wife does not talk and often quarrels. The situation made a wall between us and our married life. . . . We do not care about each other and are separated even though we live in the same shelter.

The participants were missing their connectedness with partners in everyday household activities and were vulnerable to sexual violence. The husbands often beat their wives if they became sick or pregnant. These incidents interfered with their parent or spouse roles. Roshida tearfully described her own experience:

> My husband was idle and unhelpful. Often, he sells relief items and buys cannabis. I tried to stop this bad habit. . . . Despite being pregnant, he has beaten me so badly. I felt like I would die but could not . . . because of my unborn child.

Participants were missing meaningful occupations because of their unstable relationships. These relationships were not deep, and many partners did not willingly cooperate in the performance of mutual daily activities. Moreover, poverty changed their intention to complete interdependent occupations, such as caring for children and parents, shopping, and washing clothes. However, some participants recognized this imbalanced occupational life and reformed their relationships to create harmony in their everyday life.

Subtheme 3.2: Forming New Relationships to Perform Social Roles

Rohingya families were able to create social bonds despite traumatic personal and communal experiences. Participants started to take care of their families and spend more time with their neighbors, which helped to build trustworthy relationships. Participants realized the need to compromise and support each other.

Bilkis, caressing her younger daughter, shared that "Neighbors' children were cared for here, they come to play with our kids, and I share food and receive love and care from my neighbors as an unexpected reward."

Children began to attend the temporary school in the camp and discussed goals for the future. Neighbors exchanged their resources with others. Male family members were active in family decision-making and shared some responsibilities with their spouses: "We have our breakfast together, then drop off the children at school . . . Mom and her friend [neighbor] were crafting sheets and woven nets and sometimes prepared meals." As she said this, Nazma was cooking, feeding the baby, and washing dishes, and she sometimes forgot to complete her remaining tasks.

Participants mentioned their desire to rebuild relationships and social bonds by sharing roles, taking on family responsibilities, and caring for others to enhance occupational and social participation.

Theme 4: Involvement in Precarious Occupations That Exacerbated Severe Health Risks

A vulnerable living environment and limited social and political opportunities influenced the uncertain and risky lifestyles that the participants chose or experienced. The hunger and demands of children forced parents and caregivers to be involved in dangerous and illegal occupations to provide for their families. Participants understood they were participating in unlawful work, but their helpless situation forced their involvement in such occupations.

Subtheme 4.1: Inconvenient and Inaccessible Living Conditions

Participants mentioned that their living environment affected their ability to take part in everyday activities. For example, it was not easy to shower in a public space because of the lack of privacy. In addition, many females showered at night, so their access to hot water was limited, which they believed could cause colds and fevers. Couples often needed to sleep with their parents and children in the same room, which hindered their intimate relationships. Rasel, looking down shyly, said, "A partition with the bamboo sheet divided the living space from my parents. Our 10-year-old girl sleeps with her mom, and we are missing our private space."

Participants mentioned that the environment was not accessible for older adults with diseases and disabilities. Older adults had difficulty using the squatting-style toilets because of pain in the knees, as they had to keep their knees in a semiflexed position. Other older adults refrained from going outside to the outdoor toilets in the dark and on rainy days because they had difficulty with vision, there was no electricity along the pathway, and the public toilets were far from their living quarters. In addition, physical pain affected their ability to perform activities in a low-resource environment, such as washing clothes manually and lifting heavy loads of laundry on their heads or backs, thus creating additional family burdens. The suffering lasted for an extended period of time because of the unavailability of health care workers. Overall, the inconvenient living environment restrained older adults from the possibility of doing daily activities and converting otherwise-easy activities, such as toileting and self-care, into precarious ones.

Subtheme 4.2: Continuing Unlawful Work to Survive

Daily life was complicated, and the unmet needs of children and other family members caused some people to partake in many risky and unlawful activities. The Bangladeshi government prohibits any paid or unpaid work outside of the camps, thereby compelling Rohingya refugees to engage in unlawful income-generating activities, such as the illegal selling of recreational substances, selling relief items obtained from aid agencies, gambling, and doing labor work outside the camp. Salam, close to tears, shared:

> Children were crying for new toys and rich foods . . . They wanted fish and meat every day that the relief items could not ensure. So, I am forced to do the work by any means, whether legal or illegal.

Although some Rohingyas sold their relief items because of different family members' and children's needs that relief products did not fulfill, others considered it an income-generating activity. For example, a few participants bought daily items from neighbors, such as groceries and toiletries, and sold them in the local market at an increased price. One participant was told by camp authorities to stop his work, but he was helpless. This risk-taking behavior helped him earn money.

The refugee families did not have any firewood for preparing meals and thus collected it illegally from the forest beside the camp. To do so, they would sometimes cut the trees from the host village at night. The local people took this issue very seriously. Physical altercations ensued, and one participant was injured and stayed on bed rest for a month. Many refugees were relying on cardboard cartons, polyethylene sacks, and sticks as fuel for meal preparation.

Few participants were often involved in risky and illegal occupations, such as criminal activities, smuggling, and robbery, to make money to support their families; they mentioned that the supports and care they received from the camps were inadequate. They often imported Burmese products, such as cigarettes, cosmetics, cannabis, heroin, and alcoholic drinks. Some participants worked outside the camp as day laborers. Nazma said her husband worked illegally in the nearby brickfield, getting paid $2 for 6 hr of work, without food. Owners sometimes behaved harshly and refused to pay for services because the refugees do not have legal permission to work outside the camp. One of the

participants, Sojib, had trouble selling relief products in the local market and was beaten by the local people. Not making eye contact, he said,

> Sometimes the buyers do not provide enough money and often slap or beat [us] if we argue for the fair payment. . . . I am okay with any payment as the providers did not fulfill my essentials to the refugee camp.

Thus, the participants became involved in risky occupations to meet the needs of their families. In addition, local Bangladeshis were often hostile toward Rohingya refugees. The participants said they often received warnings and punishment from the local community and were threatened with being deported from Bangladesh, and the local government seemed helpless to control such environments. This created precarious conditions in which healthy and happy participation in family and social life was unreliable.

Discussion

In this study, we explored the lived experiences of refugees existing under precarious conditions in the Rohingya camps in Bangladesh. Participants expressed restricted occupational participation because of uncertain changes in occupations, a lack of belonging, difficulty in living conditions, mistrust of others, and risk-taking behavior to obtain essential resources. These factors caused participants to experience various predicaments, such as struggling to execute a consistent routine and difficulty playing dynamic shared roles that affected their everyday lives because of a lack of trust in their spouse, siblings, neighbors, and service providers. In the following sections, we discuss these findings in relation to occupational imbalance, occupational deprivation, and adaptive occupation.

Occupational Imbalance

Occupational imbalance is defined as an inability to engage in satisfactorily diverse occupations because of a lack of balance between valued occupations and necessary or obligated occupations (Wilcock, 2006). Some Rohingya women described feeling overly occupied in roles that involved taking care of extended family members and working outside the home. Conversely, others were underoccupied and reported spending their time seeking a job in the local market or lying in bed. Yet both groups were unable to engage in meaningful occupations of choice to achieve a sense of balance and well-being. The perception of an imbalance in everyday life seemed to have the greatest implication for poor health outcomes, such as sleeplessness, drug addiction, tension, and stress or anxiety. A lack of access to health services, food shortages, and a scarcity of shelters further threatened balanced occupation, health, and well-being (Pocock et al., 2017). Given Rohingya refugees' descriptions of their experiences in the Bangladeshi camps and the subsequent occupational imbalance, it is crucial to promote adequate occupational engagement and participation to prevent the aforementioned poor health outcomes. When occupational balance was not achieved, the refugees initially engaged in inconsistent activities and later participated in dangerous activities, such as stealing, other criminal acts, and illegal work. Through the interviews, we discovered that occupational imbalance was also derived from dissatisfaction in shared occupations that depend on connectedness between couples and other family members. Previous studies conducted with asylum seekers suggest that occupational imbalance can disrupt gender norms, causing one gender to feel powerless and worthless, which negatively affects relationships, health, and well-being (Ingvarsson et al., 2016). This sense of occupational imbalance might be a contributing factor to the wide prevalence of gender-based violence reported in the global refugee literature (Pires et al., 2019).

Occupational Deprivation

This study reflects the sense of occupational deprivation that Rohingya refugees have experienced as well as the value of participation in occupation to provide avenues to reestablish a sense of worth. *Occupational deprivation* is a state of being prevented from participation in necessary and meaningful occupations because of factors that stand outside the person's immediate control, such as after a crisis, disaster, or significant displacement (Wilcock, 2006). We captured a crisis whereby the refugees were deprived of health care, food, education, and social support because they were not able to meet their basic needs while living in the camp. Refugees participated in activities that did not have any inherent meaning (i.e., lying in bed, starving for food) and did not have the opportunity to engage in desired leisure activities. Passing most of their time in the refugee camps resulted in limited social networking and support, a poor relationship with their spouse, and excessive anger and stress. The lack of engagement in paid work inside or outside the Rohingya camp created a feeling of being imprisoned in everyday life, which had the personal and social consequences of occupational deprivation and constrained participation in daily occupation. Kielhofner (2008), when discussing the foundations of human occupation, emphasized how a lack of meaningful time use reflects a sense of hopelessness, a deteriorating sense of efficacy, and a loss of control over one's occupational choices. These themes were reflected in Rohingya refugees' experiences in the Bangladeshi camps. In addition, occupational deprivation occurred in the context of precarious living conditions that affected refugees in different ways based on gender and age. Men had to engage in illegal work, women increased their caregiving responsibilities, and older adults were deprived of their daily occupations because of environmental hazards coupled with their own limited mobility. Precarious living conditions, such as inadequate food, an inability to feed children properly,

not receiving money from partners, a lack of freedom, a fear of being abused at the shelter and outside of it, a lack of leisure and social activities, a lack of treatment facilities, and mobility impairment all played a role in creating conditions of occupational deprivation.

Adaptive Occupation

A key characteristic of *adaptive occupation* is the use of adaptation to alter or change an activity so that the person can perform it successfully (Mosey, 1986). Nevertheless, prolonged occupational deprivation likely diminishes the possibility of adaptive responses to new or crisis environments (Molineux & Whiteford, 1999). Participants in this research, however, adapted both positively and negatively after experiencing occupational deprivation. The substantial psychological issues resulting from displacement and deprivation could constrain refugees from adapting to existing occupations, especially when living in underresourced host countries. Nevertheless, as a temporary solution refugees altered their daily activities and connected and shared their skills with others. They displayed an eagerness to maintain relationships with their spouse, family, and neighbors by expressing a desire to help others. Previous research has noted that refugees derive a sense of purpose from occupational adaptations that focus on "doing for others" or engaging in altruistic activities (Huot et al., 2016; Smith, 2015). Posttraumatic stress interrupted daily occupations, including rest and sleep, but the refugees adapted by balancing daily activities, sharing roles, and using spiritual healing. Involvement in spirituality was a meaningful part of their everyday routines and one of the positive adaptive responses we noted. Participants used their spiritual beliefs and rituals to heal from dissatisfaction, negativity, and occupational deprivation in a complex sociocultural context.

Because the refugees were struggling to meet their basic survival needs, this study reveals that prolonged occupational deprivation can lead to maladaptive responses, such as involvement in illegal businesses, crimes, deforestation by cutting wood, and selling relief products in the community markets. Refugees' involvement in maladaptive occupations enabled their families to survive under conditions of extreme deprivation. Some refugees believed their occupational performance was elevated by involvement in illegal businesses because doing so satisfied their family needs and allowed them to fulfill their duties as a father, husband, or son. Involvement in illegal businesses and risk-taking behavior may be defined as a maladaptation as a person attempts to rebuild their occupational identity (Huot et al., 2016). Whiteford (2000) examined maladaptive responses as adverse outcomes or failures to alleviate the negative consequence of occupational deprivation (Whiteford, 2000). However, in the present research we found both positive and negative outcomes of such responses. For example, doing unauthorized work helped fulfill family desires but also carried the risk of punishment by the authorities. Despite the fact that this involvement was unauthorized by the camp authorities, the refugees found an income-generating identity that preserved their happiness and dignity within the family. Therefore, from the refugees' perspective these maladaptive responses were facilitating their occupational participation. The relationship between occupational balance and imbalance, occupational participation and deprivation, and adaptation and maladaptation is depicted in Figure 1.

Figure 1. The experience of deprivation, imbalance, and adaptation or maladaptation in occupational participation.

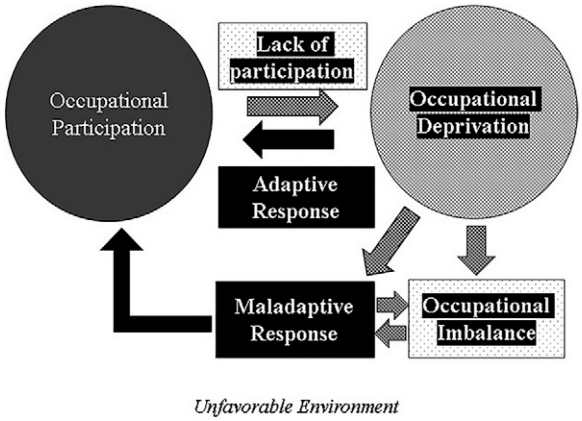

Figure 1 reveals that a lack of participation can lead to occupational deprivation because of a lack of occupations and limited freedom to engage in occupations in an unfavorable environment. Because of occupational deprivation, participants were not able to engage in a variety of preferred and meaningful occupations, thus leading to occupational imbalance. Adaptive responses, such as altering or sharing mutual occupations and spiritual healing, were prompted by occupational deprivation, thus facilitating occupational participation. However, on the basis of research data, prolonged occupational deprivation could lead to maladaptive responses, which is essentially what causes, in part, occupational imbalance. The refugees used their resources, actions, and skills to facilitate occupational participation through adaptive and maladaptive responses. Adaptive and maladaptive occupations emerged from their occupational deprivation, depending on the duration of negative experiences and available resources. Rehabilitation professionals, aid agencies, camp authorities, and governments can all play a role in helping refugees balance their occupational lives, reduce occupational deprivation, and optimize adaptive occupational behaviors.

Study Limitations

Given this study's aim, the results might not illuminate different strategies for helpful occupational participation that may facilitate refugees' health and quality of life because the focus was on insufficient occupational participation and complex relationships that were

increasingly dangerous to health and livelihood. Although we drew from participants' perspectives, more research is required to study how families and service providers understand and experience occupational participation. It is also essential to understand how sociocultural factors and social relationships influence the adaptation processes in occupational participation by involving local host community members and camp service providers in future research. Because the participants were selected purposively from government-approved camps, their experiences may not be representative of all Rohingya refugees.

Implications for Occupational Therapy Practice

There is no published literature on any occupation-based rehabilitative interventions with Rohingya refugees that can guide intervention strategies for this population in the context of underresourced refugee camps. Moreover, no occupational therapy literature has yet identified how Rohingya refugees can participate in daily occupations during conditions of occupational deprivation and how practitioners can help refugees achieve a balanced occupational life and facilitate occupational adaptation. The findings of this study can inform future programs for promoting health and well-being. Rehabilitation professionals, especially occupational therapists, can help with recovery from trauma, PTSD, and sleep disturbance by providing meaningful occupational opportunities. Some examples of occupational therapist–led programs that address these issues in resource-limited refugee camps include CircusAid (2021) and Human Rights360° (2021). Both programs promote resilience and social connectedness through engagement in meaningful activities such as circus activities, mentoring hubs, and interaction with local host communities. International funding organizations, such as United Nations agencies and national and international nongovernmental organizations, should highlight the necessity of interprofessional team members to facilitate stress-free meaningful daily occupations without physical and environmental barriers. Research indicates that Rohingya refugees need more comprehensive health and rehabilitation care because of the potential health consequences associated with their precarious living conditions (Mirza, 2015). A peer-led support group may help the refugees overcome their mental health challenges and lack of social interaction. However, in Bangladesh there are few trained occupational and rehabilitation therapists and limited financial resources to develop occupational participation programs to remediate occupational deprivation and maladaptation. Moreover, nongovernmental organizations providing services in refugee camps focus on a medical-based health care model and thus do not have an emphasis on engagement in preferred occupations (Blankvoort et al., 2018). This human resource shortage could be addressed through creative strategies. For example, a community-based rehabilitation program has been piloted in Palestinian refugee camps near Amman, Jordan. This program involved prelicensure health profession students in the United States partnering with local Jordanian volunteers to offer direct rehabilitation services as well as training workshops for refugees living in the camps (AlHeresh & Cahn, 2020).

Governments and camp authorities also have a responsibility; for instance, the refugee regulatory committee or other camp authorities could address existing gaps in psychosocial services by promoting initiatives related to need-based income-generating occupations, such as gardening and vocational training. International aid agencies can also sponsor vocational training programs and offer microloans to refugee communities to establish cooperative small businesses. Such opportunities would minimize the refugees' need to cross camp boundaries and engage in illegal occupations. Occupational opportunities such as crafting, sewing, tailoring, fishing to make money, cleaning camp areas, and loading–unloading work within camp premises may enhance livelihood opportunities and life satisfaction for refugee inhabitants of camps. Occupation-based rehabilitation services should connect refugees and their family members in the camp shelters and include awareness of maladaptive occupations. In the future, a participatory approach model of care that includes family, friends, and others could assist in developing peer- and community-based support systems. The development of such a model of care may ensure more successful transitional progress of occupational participation and enhance long-term health and overall quality of life.

Conclusion

This research increases our understanding of the experiences of participation in daily occupations among Rohingya refugees living in a temporary camp, in particular in underresourced conditions in Bangladesh. Occupational participation was constrained because of the unpredictable and complex environment or involvement in maladaptive and precarious daily activities. Rohingya refugees could benefit from sustainable rehabilitation support services. Given that Bangladesh is a developing country, the government might be unable to sufficiently increase the number of skilled occupational therapists and rehabilitation professionals. As an alternative, community-based resources sponsored by the United Nations High Commissioner for Refugees or international nongovernment organizations could be developed on an urgent basis to increase access to all health care and rehabilitation services.

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Appendix. Data-Gathering Guide

Interview Questions
1. What daily living activities can you do at this settlement [Rohingya camp]?
▪ What does your everyday life look like? Tell us a little more about your everyday life from the time you got to the camp. What are the activities you do from the morning until evening? Why those activities?
▪ Tell me details of your typical 24-hr day, including your atypical daily living activities.
▪ Why was that [the activities] challenging?
▪ How are you managing now?
2. What are the changes in activities that you are doing every day after displacement?
▪ Why so? How are you managing now?
3. How do you deal/adjust/cope with your changing activities?
▪ What are the challenges? How do you deal with the challenges?
4. How are you feeling today?
▪ What challenges prevent you from leading a meaningful daily life? How so?
5. How do you manage your physical and mental health?
▪ Why so? What existing strengths can support you to be happier and fulfilled? How?
Observation Guide
1. Observing the participant: Facial expression, gesture, voice projection and tone, emotions to the particular incidence
2. Observing activity of daily living
▪ Could you please show (demonstrate) how do you do that activity (i.e., doing household activities, washing clothes, feeding the children, collecting goods from humanitarian organizations)?
▪ Could you please show me how you engage in everyday activities outside your temporary shelter? Can we visit together today?
3. Observing the environment (is it facilitating or inhibiting daily activities?)
▪ Structure of living shelters (resources, ventilation, living rooms, etc.)
▪ Facilities, service, supplies
○ Drinking water system
○ Kitchen, gas stove, power supply, and toilet
○ Washing and cleaning areas
○ Living shelters of neighbors
○ Garbage management system
○ Children's playground and safety
○ Adults' sports and recreational venues
▪ Family privacy and relationships
▪ Relationships with the neighbors