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Occupational Therapy and Physical Dysfunction

Occupational Therapy ESSENTIALS

Occupational Therapy for People Experiencing Illness, Injury or Impairment

Promoting occupation and participation

SEVENTH EDITION

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time and space in ways that increase or decrease their congruence' (p. 17). The more congruence, or the better the fit, the more occupational performance will be increased. Conversely, the poorer the fit among the components, the poorer the outcome in occupational performance. The congruence between the three elements changes with time and space. These changes might be the consequence of the typical changes that occur across the lifespan or of unexpected disruptions.

Across the lifespan, changes are likely in a person's skills and abilities, the occupations expected of, or engaged in by, people at different times will differ, and there is often a great variety in the contexts in which these occupations are undertaken. For example, a person might attend university and undertake the occupations relevant to the role of university student at one time in his or her life and be in or out of work at another time. This will bring changes in the occupations and environments in which the person engages and the level of congruence with that person's skills. Within a shorter temporal period such as in daily life, people move between occupations and environments, creating a constant flux in the congruence of the three at any moment.

Concept of Occupation

Occupation is considered one of three components that contribute through their congruence to occupational performance. Occupation is performed by particular people in particular places at particular times. It cannot be understood outside of the context of persons and environments in which it occurs. Drawing upon the work of Csikszentmihalyi and Csikszentmihalyi (1988), Law et al. (1996) stated, 'When the challenges presented by an activity being carried out within an environment are in harmony with a person's skills, satisfaction with the experience of that activity is greater' (p. 13). It is the PEO fit in any particular event, rather than occupation per se, that is the central concern of this model.

Scope of Occupational Therapy

Law et al. (1996) stated that 'the model can be used to enrich and expand the clinical approach of occupational therapy' (p. 19). By focusing on an event, rather than the three components separately, occupational therapists aim to enhance the congruence of components in order to facilitate occupational performance in a particular circumstance. The repertoire of intervention options is quite broad, because it encompasses person, environment and occupation and their combinations. It provides for 'multiple avenues for eliciting change' (p. 18) and emphasises intervening in context.

Rich complexity in the concepts of person and environment creates expanded options for intervention. For example, viewing an individual as part of a family and community means that intervention might not be limited to centring on the individual. Similarly, considering all five domains of the environment develops a much more complex understanding of the environments in which people perform occupations. Law et al. (1996) encouraged the profession to attend to the environments in which people live their lives.

Use in Practice

The goal of occupational therapy is to promote occupational performance by enhancing the person-environment-occupation fit. The PEO model outlines a three-stage process to follow when using it in practice. The first is identification of occupational strengths and problems in occupational performance. This is done in collaboration with the person receiving occupational therapy services and by using informal interviews, semistructured interviews such as the Canadian Occupational Performance Measure and standardised measures such as the Occupational Performance History Interview (Law et al., 1996). The second stage is the assessment of personal performance components, environmental conditions and occupations that might be contributing to occupational performance problems. Finally, all of this information is brought together 'in a transactional framework' (p. 19) to plan intervention, and then outcomes are evaluated.

OCCUPATIONAL PERFORMANCE MODEL (AUSTRALIA)

The name Occupational Performance Model (Australia) denotes the country from which this model originated. It was developed in 1986 at the University of Sydney, Australia. It was published as a monograph in 1997 (Chapparo & Ranka, 1997) and has a website that was launched in 2001, restructured in 2005 and relaunched in 2014 (http://www.occupationalperformance.com).

OPM(A) is based on the occupational performance models, the dominant models of practice in occupational therapy from the 1970s. These occupational therapy models focused on the component capacities (called performance components) that a person requires for occupational performance. These include biomechanical, sensory, perceptual, cognitive, psychological and social performance components. By the 1990s, occupational therapy models centred on a broader and deeply contextualised notion of occupational performance. Both of these historical trends are evident on OPM(A). Consistent with other occupational performance models, OPM(A) uses the structure of performance areas and performance components. However, like the models of the 1990s, it emphasises the interconnectedness of person and environment. This interconnectedness is particularly evident through the labels *internal* and *external environment* (which, in other models, would be called *person* and *environment*).

The internal environment encompasses four levels – occupational performance roles, performance areas, performance components, and the core elements of mind, body and spirit. The external environment provides the context for

occupational performance. The central concern of OPM(A) is the performance of occupational roles (Fig. 9.3).

Occupational performance roles are defined as "patterns of occupational behaviour composed of configurations of self-maintenance, productivity, leisure, and rest occupations. Occupational performance roles are determined by individual person-environment-performance relationships. They are established through need and/or choice and are modified with age, ability, experience, circumstance and time" (Chapparo and Ranka, 2011, p. 6). In OPM(A), occupational performance roles are of primary importance, with the model advocating that all occupational therapists should aim to facilitate them, even when interventions target other aspects of the internal environment such as performance components.

The primacy of occupational performance roles indicates a contextualised notion of occupational performance. Occupational performance roles are influenced by both the person performing them and social expectations regarding their performance. Individuals uniquely configure their occupational performance roles according to their own goals, interests and preferences, their perceived abilities, and the expectations and values they have internalised. However, social expectations (those of society and of significant others) greatly influence occupational performance roles. They have socially agreed upon functions and an accepted code of norms (Chapparo & Ranka, 1997) and the broader context determines the need for and shapes a person's choice to engage in occupational performance roles. They change over time and with changing circumstances, abilities, and expectations.

The next two aspects of the internal environment, performance areas and performance components (traditional components of occupational performance models), guide understanding and facilitation of occupational role performance (Chapparo & Ranka, 1997). Performance areas and components guide the classification and analysis of occupation, respectively.

Performance areas provide a framework for classifying occupation. In OPM(A), the occupational performance areas are self-maintenance, productivity, leisure, and rest. Because of the idiosyncratic nature of occupation, its classification into these performance areas should be undertaken by the performer (e.g. an occupation might be productivity for one person and leisure for another). Classification of occupation by a particular person can change over time and with age, circumstance and ability.

Performance components and the notions of structure and time guide the analysis of occupation. OPM(A) identifies five performance components: biomechanical, sensory-motor, cognitive, intrapersonal and interpersonal. Whereas occupational performance models traditionally present performance components as abilities of the performer, OPM(A) presents performance components as 'forming both the component attributes of the performer as well as the components of the occupational tasks' (Chapparo & Ranka, 1997, p. 10), which mirror and prompt the operations in the performer. For example, the biomechanical performance component is defined as the operation of and interaction between physical structures of the body such as range of motion, prompted by the biomechanical attributes of the task such as size and weight.

In OPM(A), three levels of complexity in occupation – subtasks, tasks and routines – are analysed in terms of structure and time. Regarding *structure,* tasks can be broken down into subtasks and grouped into routines. For example, the task of drinking

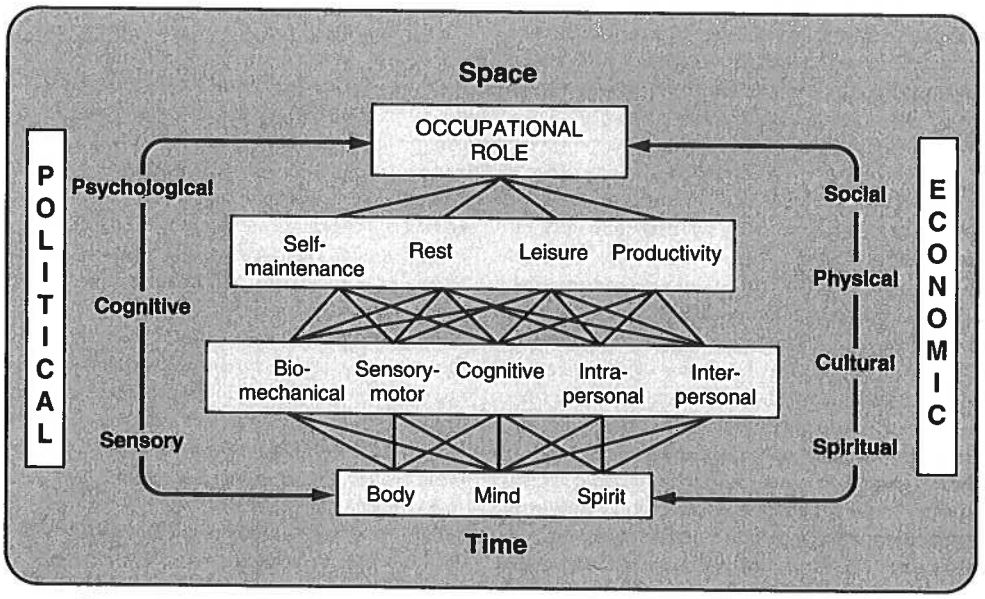

FIG. 9.3 ■ Occupational Performance Model (Australia). *(From OPM(A), www.occupationalperformance.com.)*

has subtasks such as reaching for the glass, grasping it and lifting it. Additionally, drinking could be part of a routine. Routines are sequences of tasks and can be prompted by internal or external cues. They create patterns of tasks that can be fixed or flexible. Many self-maintenance routines comprise fixed task patterns, because there is generally a defined set of tasks to be performed. Chapparo and Ranka (1997) emphasised that sociocultural expectations shape these fixed routines. Flexible routines can be undertaken in many different ways and can contain a varied range of tasks, provided they are acceptable to the performer.

In terms of *time*, routines can be regular or intermittent. Regular routines are performed on a daily basis and are usually critical to a person's functioning in a particular environment. Regular routines often become habitual through repetition, whereby they can be performed without conscious attention. For example, a person could shower or undertake a daily commute while thinking about something else. This may leave him or her with a sense of time having flown and little recollection of performing the task. Intermittent routines do not have to be carried out daily but may still be critical to the performance of occupation in a particular environment. In the longer term, the temporal dimension of occupational performance also applies to the lifespan, whereby routines, tasks and subtasks vary with age, circumstance and ability.

The *core elements* of occupational performance constitute the final aspect of the internal environment, comprising body, mind and spirit. The performer is considered holistically, whereby all three elements combine to influence what a person does, how it is done and how it is experienced. The body element refers to 'all of the tangible physical elements of human structure', mind is defined as 'the core of our conscious and unconscious intellect which forms the basis of our ability to understand and reason', and the spiritual element is 'defined loosely as that aspect of humans which seeks a sense of harmony within self and between self and nature, others and in some cases an ultimate other; seeks an existing mystery to life; inner conviction; hope and meaning' (Chapparo & Ranka, 1997, pp. 12-13). These core elements translate to the doing, knowing, and being dimensions of occupational performance, respectively.

The *external environment*, illustrated in the most recent diagram (Ranka & Chapparo, 2011), has six dimensions – sensory, physical, cultural, social, psychological and cognitive. Only the first four, which appeared in the 1997 publication, are discussed in descriptions of OPM(A). However, the inclusion of these last two are part of a larger conceptual shift to consider context (rather than environment) and the contextualising of occupation. In the 2001 diagram, the context also has political and economic dimensions. All dimensions of the context combine to shape what action is taken and how, as well as how it is experienced.

The first four dimensions of the external environment are as follows: the physical environment is 'the natural and constructed surroundings of a person' (Chapparo & Ranka, 1997, p. 15). The sensory environment 'provides the natural cues that direct occupational performance' (p. 15) and is most closely linked to the sensory and cognitive performance components. The social environment results from people's relationships and contributes to expectations regarding behaviour. The cultural environment 'is composed of subsystems of values, beliefs, ideals, and customs which are learned and communicated to contribute to the behavioural boundaries of a person or groups of people' (p. 15). Cultural expectations influence occupational roles and the related tasks, subtasks and routines performed, as well as how they are performed, the standards expected and how people think and feel about themselves (self-identity).

The constructs of space and time are aspects of the external environment that pervade occupational performance. Both space and time have physical and felt dimensions, referring to how they manifest and how they are experienced, respectively. *Physical space* includes 'our understanding about body structures, body systems, objects with which people interact and the wider physical world within which people exist and function' (Chapparo & Ranka, 1997, p. 16). *Felt space* is the subjective experience of space and includes the way people use space, their interactions within it and its meaning to them. Space pervades all aspects of occupational performance. For example, performance components will be activated by the demands of performing occupation in a particular place and the experience will be created through interpretation by the body-mind-spirit core elements. In turn, this experience will influence the performance of occupation and occupational roles.

Similarly, time has both physical and felt dimensions. *Physical time* (chronological time) can be measured. Physical time is required when recording muscle response times and forms the basis of schedules and deadlines. *Felt time* is 'a person's understanding of time based on the meaning that is attributed to it' (Chapparo & Ranka, 1997, p. 18) and constantly changes through experience. Felt time underpins a person's sense of how much time is available for an occupation and whether it could be completed in that time, as well as whether it is the 'right' time to do something.

Concept of Occupation

The central construct of the model is occupational performance (consistent with occupational therapy models in the 1990s and in contrast to more recent editions of models that include participation), which is defined as 'the ability to perceive, desire, recall, plan and carry out roles, routines, tasks and subtasks for the purpose of self-maintenance, productivity, leisure and rest in response to demands of the internal and/or external environment' (Chapparo & Ranka, 1997, p. 4). The requirements for both occupation and its performance are evident in this definition. Occupation serves a purpose in a person's life through occupational roles and the performance areas, all of which stimulate perceiving and desiring. Performing occupation requires recalling, planning and carrying out.

In OPM(A), occupation is presented as a *process*, rather than an entity. It is the process of purposeful and meaningful engagement, rather than the things in which people engage (i.e. tasks and subtasks within routines and roles). People are engaged in

the process of occupation when they undertake routines, tasks and subtasks for the purpose of fulfilling occupational roles in the areas of self-maintenance, productivity, leisure and rest. It is through occupation that people create their occupational being or identity. Occupational being 'is expressed through occupational performance and ultimately defined by people's occupational roles' (Chapparo & Ranka, 1997, p. 4). Occupational roles are shaped by the demands and expectations of the external environment as well as the capacities and interests of the person. Therefore occupation is presented as the conduit between the person and the environment (internal and external environments). It is through occupation that people and environments interact.

Scope of Occupational Therapy

The occupational nature of humans is the fundamental concern of occupational therapy. The profession is understood in terms of four principles. These are as follows: (1) Occupational therapists address the occupational needs of the people receiving occupational therapy. (2) Occupational therapists aim for these people to be satisfied with their occupational existence. (3) Occupational therapists use strategies to enhance people's occupational performance. (4) Occupational performance is the ability to perform (including 'doing', 'knowing' and 'being' dimensions) the occupations (roles, activities and tasks) a person wants to do, needs to do and is capable of doing (Ranka & Chapparo, 1997).

The centrality of occupational role performance is encapsulated in the statement, '[T]herapy provided which is not related to occupational role performance is NOT occupational therapy' (Ranka & Chapparo, 1997). However, OPM(A) assumes that, providing that the ultimate aim is addressing occupational need and facilitating occupational role performance, the methods used in occupational therapy could target any level of the internal and external environments. For example, interventions could address performance components, performance areas, or aspects of the external environment.

Use in Practice

OPM(A) provides a framework for guiding occupational therapists to address people's occupational needs. Occupational therapists should provide 'opportunities for choice and participation in role (Occupational Performance Role), routine, and task performance (Occupational Performance Areas)' (Ranka & Chapparo, 1997) and through goal-directed tasks. Programmes can be designed to alter or compensate for underlying components of occupational performance and address their relationship with the three core elements of body, mind, and spirit, as well as address barriers to occupational performance posed by the external environment.

Occupational analysis provides the foundation for practice using OPM(A). Occupational analysis is a holistic process. Identifying occupational role demands – that is, what people desire or need to do – is the primary purpose of the analysis. Relevant to these, analysis of the other components of the model is undertaken. The following questions are provided to guide occupational therapists in using the model (Ranka & Chapparo, 1997):

- What occupational roles are desired or needed? (What does the person need or want to 'do'? What does the person's family, partner or other significant people require them to 'do'? What is the person capable of 'doing'?)
- What occupational routines, tasks and subtasks from the occupational areas are required to enable role performance (e.g. brushing teeth; conducting a meeting – 'doing'; instructing others to transfer – 'knowing'; being comfortably seated and positioned – 'being')?
- What performance components or environmental factors are causing difficulty in task performance (e.g. weakness, lack of confidence, inadequate knowledge, inaccessible bathroom, absence of cultural tools, socially shunned, room is too dark and hot, lack of finances)?
- Are core element functions damaged, at risk or healthy (e.g. fractures, systemic illness, mental processing, will to live and sense of hope)?
- What is this person's time and space fit? Are things 'in place' to support occupational performance (e.g. environmental supports, personal preparedness)?
- What is the therapist's preferred approach to intervention (e.g. biomechanical, neurodevelopmental, sensory integrative, behavioural, psychodynamic or interpersonal techniques)?
- How can the therapist apply preferred techniques to enhance a person's role, routine, task or subtask accomplishment (e.g. use techniques within the context of a task or relevant performance environment)?

The main practice resource available is the Perceive, Recall, Plan and Perform (PRPP) system of task analysis. It is an assessment and intervention model and addresses the cognitive dimension of performance. The PRPP model has four interconnected quadrants to categorise cognitive processing strategies used for task performance. These are: 'sensory perception (Perceive), memory (Recall), response planning and evaluation (Plan) and performance monitoring (Perform)' (Nott, Chapparo, & Heard, 2009, p. 308) and three information processing strategies are identified for each quadrant. The PRPP assessment is described as a 'standardised, client-centred, criterion referenced, ecological occupational therapy assessment of occupational performance' (Ranka, 2014). The PRPP system uses a two-stage analysis process. Stage one uses a standard behavioural task analysis and stage two adopts a cognitive task analysis.

CANADIAN MODEL OF OCCUPATIONAL PERFORMANCE AND ENGAGEMENT

In the book *Enabling Occupation II: Advancing an Occupational Therapy Vision for Health, Well-being, & Justice Through*