CLINICAL REASONING AND THE INTERNATIONAL CLASSIFICATION OF FUNCTIONING: A LINKING FRAMEWORK

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The International Classification of Functioning, Disability and Health (ICF) has been promoted as a universal framework for allied health professionals since its introduction in 2001 by the World Health Organization. This article explores the links between the ICF (as a “unifying language”) and clinical reasoning (as a “language of practice”), and proposes a linking framework to stimulate discussion around a model that could both guide and teach therapy-based decision-making processes. The inclusion of the ICF into practice, via clinical reasoning, will encourage a broad and consistent approach to health care within the occupational therapy profession.

KEY WORDS: Clinical reasoning • Framework • International Classification of Functioning

Introduction

Since its adoption in March 2001, the International Classification of Functioning, Disability and Health (ICF) has been promoted as a common, universal framework for allied health professionals, and as a way of unifying and standardizing language for the description of health and health-related states (World Health Organization, 2001).

Within the literature, there have been linkages made between the concepts of the ICF and the conceptual models of occupational therapy and occupational science (Imms, 2006; McLaughlin Gray, 2001; Stamm, Cieza, Machold, Smolen, & Stucki, 2006), with agreement that, at a theoretical level, there are “…strong conceptual connections between the ICF and occupational therapy models” (Stamm et al., p. 17). Occupational therapists are also being urged to use the ICF to “…build and communicate knowledge of practice that counts at a policy level” (Imms, p. 66). It is therefore timely that the profession continues the discussion on how best to implement the ICF into our practice. The following opinion piece is an example of how this integration could occur.

This article explores the links between the ICF (as a “unifying language”) and clinical reasoning (as a “language of practice”). The aim of this paper is to promote discussion around using the ICF to assist occupational therapists to articulate how they think in the midst of practice. By drawing correlations between the ICF and clinical reasoning, this article proposes a framework that could be further developed to guide therapy-based decision-making processes. Such a model could help therapists to ensure that the best therapeutic outcomes are achieved.

ICF and Clinical Reasoning: A Proposed Framework for Practice

The development of the ICF has resulted in a common language with which all health care workers can describe and compare health and functioning. More widespread use of the ICF should lead to a more integrated and standardized approach to health care (Australian Institute of Health and Welfare, 2003). Within occupational therapy, clinical reasoning approaches grew out of a recognized need for therapists to have a “language of
Clinical reasoning was seen to give voice to the tacit knowledge that a therapist uses in clinical decision-making (Mattingly & Fleming). Clinical reasoning has been widely discussed in occupational therapy literature, with some variation in the aspects of reasoning proposed (Chapparo & Ranka, 2000; Mattingly & Fleming; Schell & Cervero, 1993; Schell, 2003). The approach outlined by Schell has been adopted and utilized for the purposes of this paper.

In considering the potential of both the ICF and clinical reasoning as “languages” to foster communication, the question arises as to what connections can be made between these two languages. Such connections could assist students and practicing therapists to communicate their clinical decision-making into the more universal language of the ICF.

While the ICF is essentially a system of classification with specified categories, it has at its core an understanding that function is the result of a dynamic and interactive process between various components, as indicated in the model proposed by the World Health Organization (Figure 1). In linking the ICF and clinical reasoning, the emphasis is on this dynamic interactive process within each approach, rather than on the components as separate entities or categories to be compared and contrasted. Figure 2 is a proposed representation of how aspects of clinical reasoning could link to the dynamics of the ICF model.

**Scientific Reasoning and the Body Structures and Functions Dynamic**

Scientific reasoning has been described by Schell (2003) as the reasoning used to conceptualize the disease and disability of a patient. Therapists use this reasoning to decide on what treatment options may be employed to remediate problems. Scientific reasoning is described as having two forms, diagnostic reasoning and procedural reasoning (Chapparo & Ranka, 2000; Schell).
Diagnostic reasoning is concerned with problem sensing and problem definition. This process starts in advance of patient contact, when therapists begin to hypothesize about what occupational performance problems a patient may have (Chapparo & Ranka, 2000; Schell, 2003).

Procedural reasoning is mainly concerned with the disease or disability of a patient and how it will progress. When this reasoning is used, therapists base their treatment for an individual on their previous clinical experience, assessment findings, and any information around the individual’s condition (Schell, 2003).

Schell (2003) proposed that in scientific reasoning, the therapist asks a number of questions that relate directly to the impact of a specific health condition on the individual’s body and, consequently, their occupational performance. Then, the therapist will start to build a picture of possible presentations and interventions for the individual. Questions include those about the nature of the illness or injury and typical performance components that may be affected by this type of health condition (Schell). In correlating this with the ICF model, it is proposed that when using scientific reasoning, the therapist engages with knowledge about the health condition of the person and the impact this has on their body functions and structures and, as a consequence, on their activity. In this way, scientific reasoning correlates to the dynamic represented in the ICF model between the health condition and the body functions and structures, and the potential impact on activity.

Narrative Reasoning and the Activities, Participation and Contextual Factors Dynamic

Both the ICF and clinical reasoning models recognize that disease or disorder is a unique experience for the individual and needs to be considered as such (Mattingly, 1991). Schell (2003) highlights that narrative reasoning requires the therapist to think about more than the disease process and organ systems, and attempt to understand the experience from the patient’s perspective. Narrative is the form of reasoning a therapist employs when they want to understand the patient as an individual, in order to tailor treatment to their specific needs and preferences. Chapparo and Ranka (2000) refer to narrative reasoning as the therapist striving to understand the story behind each patient, thus ensuring that treatment includes therapeutic activities that are meaningful. Narrative reasoning asks questions about the person’s life story and the impact of the health condition on this story. In focusing on the patient as an “occupational being”, the therapist is better able to comprehend the patients’ past and current situation and assist in creating a new narrative for the future (Schell).

The ICF model identifies that the activities a person undertakes and the level of participation they experience in their community is impacted upon by the restrictions and limitations that a health condition may impose, as well as by personal and contextual factors that make up a person’s life. These personal and contextual factors can either be barriers or facilitators to activity and participation. As barriers, they can result in activity limitations or participation restrictions. In this way, factors about an individual—their age, life experience, interests, relationships, social and community life, in fact, their life story—become part of the dynamic of activity and participation, as represented in the ICF model (see Figure 2). As occupational therapists, we often refer to a person’s life roles or areas of occupational performance when discussing intervention decisions based on our narrative reasoning. This language is particular to our profession and often not well understood by colleagues from other disciplines. Using the language of the ICF—discussing activities and activity limitations, participation and participation restrictions—we are able to relay the same information, but in a more widely accepted and understood language.

Pragmatic and Ethical Reasoning and the Contextual Factors Dynamic

In the ICF model, contextual factors represent the complete background of an individual’s life and living situation. Contextual factors include two components: environmental factors and personal factors. Environmental factors constitute the physical, social and attitudinal environment in which people live and conduct their lives. These factors are either barriers to or facilitators of the person’s functioning. Environmental factors include location, home, products, technology, services, and systems (World Health Organization, 2001). Personal factors, according to the ICF model, include cultural beliefs, values and individual preferences, which may impact on other areas of the individual’s health condition (World Health Organization).

In engaging in pragmatic reasoning, the therapist uses knowledge of the contextual factors in which the therapist–patient interaction takes place, to make judgments about clinical intervention. These factors include the location of therapy, regional or rural setting, resources within practice, funding for services, the patient’s home and patient’s access to support and services. Contextual issues impact on many aspects of therapeutic design and delivery. This contextual knowledge correlates with the environmental and personal factors proposed in the ICF model (see Figure 2).
### Table. Clinical reasoning questions and the International Classification of Functioning, Disability and Health (ICF)

<table>
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<th>Type of reasoning*</th>
<th>Proposed questions*</th>
<th>Related ICF components</th>
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| **Scientific:** used to understand the nature of the condition | • What is the nature of the illness, injury, developmental problem?  
• What are common disabilities resulting from this condition?  
• What are the typical performance components affected by this condition?  
• What are typical contextual factors that affect performance?  
• What theories & research are available to guide assessment & intervention?  
• What intervention protocols are applicable to this person’s condition? | • Health condition  
• Impact on body structures & functions |
| **Narrative:** used to understand the meaning of the condition to the person | • What is this person’s life story?  
• What is the nature of this person as an occupational being?  
• How has the health condition affected the person’s life story or ability to continue his/her life story?  
• What occupational activities are meaningful to this person and useful to meet therapy goals? | • Activities, participation, contextual factors  
• Health condition, impact on body structures & functions  
• Impact on activities & participation, contextual factors  
• Activities & participation  
• Contextual factors |
| **Pragmatic:** used to understand the practical issues affecting clinical action | • Who referred this person & why?  
• Who is paying for their services & what are their expectations?  
• What family or caregiver resources are there to support intervention?  
• What are the expectations of my supervisor & workplace?  
• How much time is there to see this person?  
• What therapy space & equipment is available?  
• What are my clinical competencies? | • Contextual factors |
| **Ethical:** used to choose morally defensible actions given competing interests | • What are the benefits & risks to the person related to service provision & do the benefits warrant the risks?  
• In the face of limited time & resources, what is the fairest way to prioritize care?  
• How can I balance the goals of the person receiving the services with those of the caregiver when they don’t agree?  
• To what degree do I customize documentation of services to improve reimbursement?  
• What should I do when other members of the multidisciplinary team are operating in ways that I feel conflict with the goals of the person receiving the services? | • Contextual factors |

*Columns 1 and 2 are from Schell, 2003, Table 11-1, p. 135.
Therapists are often required to balance one ethical value against another. This process is typically unconscious, but it drives decision-making throughout treatment (Chapparo & Ranka, 2000). The therapist is an integral aspect of the contextual environment of the individual, in that their attitudes, values, commitment, level of expertise and communication impact on outcomes for the individual. Consideration of these issues within a clinical reasoning framework has been identified as ethical reasoning. Ethical reasoning is used to determine personal factors or values that may substantially impact on the clinical reasoning process (Schell, 2003). Pragmatic and ethical reasoning are therefore proposed to sit within the dynamic of contextual factors (environmental and personal) in the ICF model (see Figure 2).

In drawing a correlation between clinical reasoning processes and the ICF model, it is possible to translate our language of practice (clinical reasoning) into the more unifying language of the ICF. When identifying interventions to use in a clinical situation, relating these decisions back to the ICF terminology of health conditions, body structures and functions, activity limitations, participation restrictions, and personal and contextual factors will aid in broadening the understanding of the profession of occupational therapy within the wider health care context. The Table illustrates how the questions asked in clinical reasoning (Schell, 2003) may relate to the components of the ICF model.

**Benefits for Practice**

Drawing correlations between the ICF and clinical reasoning proposes a framework that could enhance therapy-based decision-making processes. The development of such a model could further provide a way of coherently translating clinical judgment into a universally recognized common language within health care systems. Integrating the ICF and clinical reasoning may have particular benefits to students and newly graduated therapists (whose clinical reasoning skills are still being developed) by making the links between these commonly taught approaches explicit. The correlation of clinical reasoning processes to the ICF would encourage a broad and consistent approach to health care and would benefit occupational therapy by ensuring that the profession utilizes the standard approach to health care being adopted around the world. Further discussion and exploration into the use of the ICF in occupational therapy practice is required, including the integration of ICF concepts and terminology into professional report writing, interpretation of assessments and framing of interventions.

**References**


