

Report

Use of the International Classification of Functioning, Disability and Health (ICF) in clinical education at the Department of Physical Therapy: At The T University (2010)

Kiyoshi Nawai, Katsuhiko Fukuyama, Yasufumi Suzuki

Department of Physical Therapy, Faculty of Medical and Health sciences,
Tsukuba International University

Abstract

This study assessed the use of the International Classification of Functioning, Disability, and Health (ICF) in clinical education at our university (T University, Japan). The study analyzed 85 patient case reports of third-year physical therapy students in the Ibaraki Prefecture. The third-year student clinical education program is aimed at developing evaluation skills. The reports were analyzed according to the ICF. The study found that 70.6% of students received study supervision using the ICF, while 29.4% were supervised using the International Classification of Impairments, Disabilities, and Handicaps (ICIDH). The results showed that in the Ibaraki Prefecture, clinical education based on the ICF is highly advanced. Additionally, ICIDH is used for patient assessment. Regarding the use of the ICF in the Ibaraki Prefecture, further investigations are necessary. In the future, clinical education methods should be examined to bring clinical educators together and discuss patient evaluation in inter-professional education and clinical settings.

(Med Health Sci Res TIU 4: 21-26 / Accepted 18 Oct, 2012)

Keyword : Clinical Education, Interprofessional Education, ICF, ICIDH, The Nagi model, Assessment

Introduction

Physical therapy is one of several health care

professions involved in the management of limitations in functioning across acute rehabilitation and community health care situations. Physical therapists examine, evaluate, diagnose, and prognosticate the limitations in functioning in close interaction with patients, their families, and caregivers, while taking into account the patients' goals, which determine the most appropriate interventions with the aim of optimizing functioning (Finger ME, 2006). In the classification

Connector: Kiyoshi Nawai
Department of Physical Therapy,
Tsukuba International University,
6-8-33, Manabe Tsuchiura, Ibaraki 300-0051, Japan.
Phone: +81-29-883-6025
Fax : +81-29-826-6776
e-mail: k-nawai@tius.ac.jp

of disabilities, the International Classification of Functioning, Disability and Health (ICF), endorsed by the World Health Organization, is the standard used (World Health Organization, 2001; 2012). Physical therapists can now rely on a globally recognized framework and classification that can be used in different health care situations by all health care professionals in multidisciplinary teams. It is considered necessary for rehabilitation specialists to study this standard classification of disabilities (Peterson DB, 2005; Tempest S, 2006; Jelsma J, 2009). Homa et al. (2005) pointed out the advantages of using the ICF in students' clinical education. The ICF has already had a major impact on the way in which disability data are conceptualized, collected, and processed. However, Asakawa et al. (2008) highlighted the low percentage of actual use of the

ICF in clinical education. In this context, the aim of this study was to assess the use of the ICF in clinical education at our university (T University).

Materials and methods

The study examined 85 student case reports of third-year physical therapy students in the Ibaraki Prefecture. The methodology was based on a retrospective survey of case report forms, which was conducted after the end of the clinical education program. Criteria identified as equivalent to the ICF assessment were as follows: ICF life functions, physical and mental functions/structures, activities, participation, environmental factors, and individual factors (Fig. 1; Table 1). The following

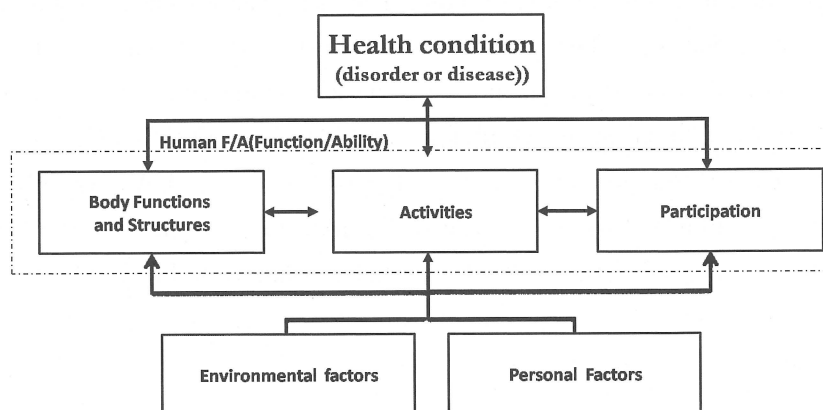


Fig. 1 Interactions between the components of international classification of functioning, disability and health (WHO).

Table 1 Domain of international classification of functioning, disability and health (WHO).

- | |
|---|
| <ul style="list-style-type: none"> • Body function and Body structures <ul style="list-style-type: none"> — global mental functions, neuromusculoskeletal and movement-related functions, pain, structures of the nervous system, structures related to movement, etc.. • Activity and participation <ul style="list-style-type: none"> — learning and knowledge, communication, changing and maintaining body position, self-care, moving around using transportation, community, social and civic life, etc.. • Environmental factors <ul style="list-style-type: none"> — products and technology, natural environment and human-made changes to environment, support and relationships, services, systems and policies • Personal factors |
|---|

items did not correspond to the ICF: cases where the International Classification of Impairments, Disabilities, and Handicaps (ICIDH) was used, or cases in which the items of, “physical and mental functions or body structure,” “activities,” and “participation” were present, but contextual information was not organized.

Results

Overall, 60 of the 85 student reports (70.6%) were shown to receive study supervision using the ICF, while 25 (29.4%) of students received supervision using the ICIDH (Table 2).

Table 2 Ratio of use of ICF model in Clinical Education at the T university

n=85		
	Number of person	Percentages
Using the ICF,	60	70.6
Using the ICIDH	25	29.4
Using the Other	0	0

Discussion

Several models have been created to define disability. However, there have been various reports on the usefulness of learning using the ICF in rehabilitation case reports (Allan CM, 2006; Homa DB, 2005; 2007; Asakawa Y, 2008). According to the study of Fujikawa et al. (2005), the percentage of third-year vocational school students in the Kanagawa Prefecture receiving ICF-based study supervision during the clinical education program was 4.8% in 2004. When comparing our study results with the findings of Fujikawa et al., factors such as different regions (Kanagawa Prefecture versus Ibaraki Prefecture), the six-year gap between the two studies conducted in 2004 and 2010, and the differences between vocational schools and

universities need to be taken into account. Nevertheless, there is a substantial difference in the reported results, 70.6% in the present study and 4.8% in the study of Fujikawa et al., suggesting that clinical education based on the ICF is high advanced in the Ibaraki Prefecture. However, in a survey of physical therapists in the Ibaraki Prefecture, Asakawa et al. (2008) previously claimed that the percentage of physical therapists using the ICF in a clinical setting was much lower at 24.3%. In the present study, apart from the ICF, the ICIDH was also used for assessment (Table 3). Additionally, the usefulness of the Nagi model (Nagi SZ, 1965; 1991) for physical therapy treatment plans was also noted (Table 4). It can therefore be surmised that assessment methods focusing on physical therapy are used in a timely manner in actual treatment situations. In other words, this study suggests that the ICF is used for patient evaluations when providing supervision for students in a clinical setting, but supervisors may also use other methods of assessment apart from the ICF in patient evaluations. It is necessary for physical therapists to use the particular assessment methods that they consider to be appropriate based on the needs of the patient, but it is desirable for guidance to be given during students' clinical education as to the use of the ICF, as it facilitates the comprehensive evaluation of disabilities (Fig. 2). The ICF also serves an important function in enabling problems to be shared when physical therapists participate in rehabilitation teams. Regarding inter-professional education at T University, disability is taught using the ICF (Nawai, 2011). In the future, there will be a need to examine clinical education methods, bringing clinical educators together in order to discuss patient evaluation in inter-professional education and clinical settings.

Table 3 International Classification of Impairments, Disabilities, and Handicaps Model

	Disease	Impairment	Disability	Handicap
Definition	Biochemical, physiologic, and anatomical abnormalities of the human organism	Loss or abnormality at the tissue, organ, or body system level	Inability to perform a task or participate in activity considered normal for a human being	Disadvantage for a given individual, resulting from an impairment or a disability that limits or prevents the fulfillment of a role that is normal (depending on age, sex, and social and cultural factors) for that individual
Frame of reference	Cell	Tissue, organ, body system	Whole person, external environment, culture	Society(not the individual)
Example: Point guard on basketball team sustains a 3-degree ACL tear	3-degree ACL tear	+ Lachman's test Knee flexion 80 degrees	Inability to run Inability to jump	Inability to play basketball

Based on jette AM. Physical disablement concepts for physical therapy research and practice. Phys Ther. 1994,74(5):11-18.

Table 4 Nagi Model of Disablements

	Active Pathology	Physical Impairment	Functional Limitation	Disability
Definition	The intrinsic pathology or disorder	Anatomical, physiological, mental, or emotional abnormality or loss	Limitation of performance at the level the whole organism or person	Limitation in performance of socially defined roles and tasks within a sociocultural and physical environment
Frame of reference	Cell	Tissue, organ, body system	Whole person,	External environment / culture / society
Example: Point guard on basketball team sustains a 3-degree ACL tear	3-degree ACL tear	+ Lachman's test Knee flexion 80 degrees	Inability to run Inability to jump	Unable to play basketball

Based on jette AM. Physical disablement concepts for physical therapy research and practice. Phys Ther. 1994,74(5):11-18.

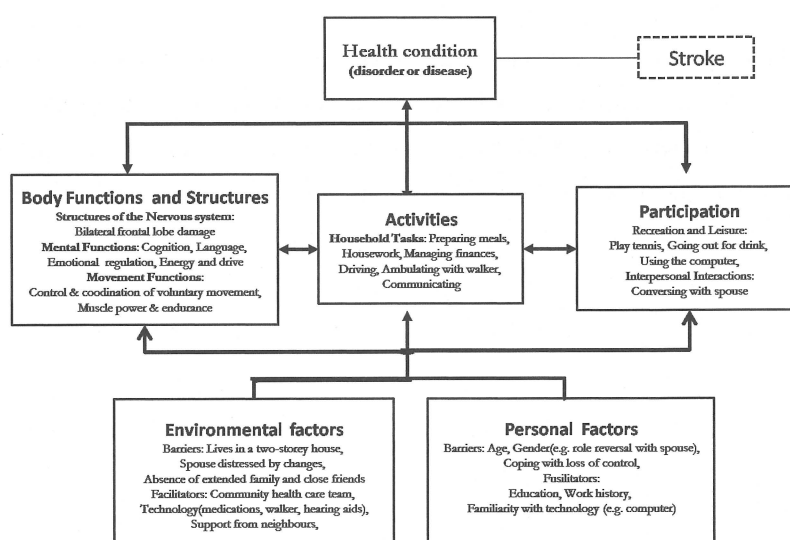


Fig. 2 Visual depiction of how Mr. Satake' health and functional status can be related to the ICF conceptual framework. Based on Tempest S and McIntyre A, 2006.

- for interprofessional education: the international classification of functioning, disability and health(ICF). *Journal of Interprofessional Care* 20: 235-245.
- Asakawa Y, Usuda S, Sato H (2008) Current situation regarding utilization of the international classification of functioning, disability and health by physical therapists. *Rigakuryoho Kagaku* 23: 267-273.
- Finger ME, Cieza A, Stoll J, Stucki G, Huber EO (2006) Identification of intervention categories for physical therapy, based on the international classification of functioning, disability and health: a delphi Exercise. *Phys Ther* 86: 1203-1220.
- Fujikawa T, Mizuno T, Nawai K (2005) ICF okatuyoushita rinshougenba to rinshoujissyu no genzyo? shourei houkoku no bunseki kara- (Current situation of clinical education and clinical site utilized of the international classification of functioning, disability and health). *Rigaku Ryouhogaku* 32:577. (in Japanese)
- Homa DB (2005) Using the international classification of functioning, disability and health (ICF) in teaching rehabilitation client assessment. *Rehabil Edu* 19: 119-128.
- Homa DB(2007) Using the international classification of functioning, disability and health (ICF) in job placement. *Work* 29: 277-286.
- Jelsma J (2009) Use of the international classification of functioning, disability and health: a literature survey. *J Rehabil Med* 41: 1-12.
- Nagi SZ(1965) Some conceptual issues in disability and rehabilitation, In: Sussman MB (Ed), *Sociology and Rehabilitation*. American Sociological Association, Washington, DC, pp.100-113.
- Nagi SZ(1991) Disability concepts revisited: Implications for prevention, In: Pope AM, Tarlov AR (Ed), *Disability in america: toward a national agenda for prevention*, National Academy Press, Washington, DC, pp.309-327.
- Nawai K, Kobayashi S, Sugino K, Fukaya T, Narita T, Sato K, Nagai S, Okubo Y, Hoshi T(2010) Mondai kibangata gakushuhou o mochiita shougaikan iusei no kokoromi (Using problem-based learning in teaching disabilities assessment), *Rigakuryoho Ibaraki* 14: 43-47. (in Japanese)
- Peterson DB, Rosenthal DA(2005) The international classification of functioning, disability and Health(ICF):A primer for rehabilitation educators. *Rehabil Edu* 19: 81-94.
- Tempest S, McIntyre A(2006) Using the ICF to Clarify team roles and demonstrate clinical reasoning in stroke rehabilitation. *Disabil Rehabil* 30: 663-667.
- World Health Organization(2001) *International classification of functioning, disability and health*. Geneva, World Health Organization.
- Web site of World Health Organization. <http://www.who.int/classifications/icf/en/> (Retrieved: 23 July 2012)

原著論文

当校の理学療法学科評価実習における国際生活機能分類の活用状況

縄井清志、福山勝彦、鈴木康文

つくば国際大学医療保健学部理学療法学科

【要 旨】 国際生活機能分類(ICF)は、障害に関する国際標準であり、リハビリテーションの臨床だけでなく教育においても有効なツールである。しかし、臨床においては国際障害分類(ICIDH)などで患者評価を行うことが少なくない。本研究の目的は、理学療法学科学生の実習においてICFを使って学習指導される割合を明らかにすることである。対象はT大学理学療法学科3年過程の85人である。調査の結果、ICF を使って患者の評価を指導された学生は60人であり、その割合は70.6%であった。先行研究と比較すると、臨床教育における ICF の使用率は高いことが明らかになった。しかし、茨城県での ICF の活用が進んでいるかどうかの検討には更なる調査が必要である。また、実際の治療では他のアセスメント手法が用いられている場合もあることから、今後、学内教育と臨床教育の連携を深める必要性も示唆された。(第4号: 21-26頁/2012年10月18日採択)

キーワード: 臨床教育, 卒前教育, 国際生活機能分類, 国際障害分類, Nagi モデル, 評価