Accepted Manuscript

Title: SCADI: A standard dataset for self-care problems classification of children with physical and motor disability

Author: M.S. Zarchi S.M.M. Fatemi Bushehri M. Dehghanizadeh

PII: S1386-5056(18)30183-7
DOI: https://doi.org/doi:10.1016/j.ijmedinf.2018.03.003
Reference: IJB 3669

To appear in: *International Journal of Medical Informatics*

Received date: 8-6-2017
Revised date: 28-1-2018
Accepted date: 11-3-2018


This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.
SCADI: A standard dataset for self-care problems classification of children with physical and motor disability

M.S. Zarchi\textsuperscript{a}, S.M.M. Fatemi_Bushehri\textsuperscript{b,∗}, M. Dehghanizadeh\textsuperscript{c}

\textsuperscript{a}Assistant Professor of Faculty of Engineering, Meybod University, Meybod, Iran
\textsuperscript{b}M.S.E. Software Engineering, Department of Software Engineering, Yazd Branch, Islamic Azad University, Yazd, Iran.
\textsuperscript{c}PhD Student of Occupational Therapy, Department of Occupational Therapy, School of Rehabilitation, Iran University of Medical Sciences, Tehran, Iran

Abstract

Self-Care problems diagnosis and classification is an important challenge in exceptional children health care systems. Since, self-care problems classification is a time-consuming process and requires expert occupational therapists, using an expert system in classifying these problems can decrease cost and time, efficiently. Expert systems refer to the systems that are based on artificial intelligence methods, which have the ability to learn, infer, and predict. In order to configure and train an expert system, a standard dataset is critical for the learning phase. Hence, in this research, a new standard dataset called SCADI (Self-Care Activities Dataset based on ICF-CY) is introduced innovatively. SCADI is based on ICF-CY, which is a conceptual framework, released by the World Health Organization. According to the best of our knowledge, SCADI is the first standard dataset in the self-care activate based on ICF-CY in which 29 self-care activities are considered. In this research, to show the applicability of SCADI in the expert systems, two different types of expert systems are proposed for the self-care problems classification of children with physical and motor disability. In the first expert system, an Artificial Neural Network (ANN) is employed as a classifier. This classifier is trained by using SCADI during the learning process. Since ANNs do not provide any explanation for the inference rules and manners, in the second ex-
دریافت فوری
متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات