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Guest Editorial

Ergonomics and People with Disabilities

Bruno Maia de Guimarães
Federal University of Pernambuco, Rua da Amizade, 109, apto: 703, Graças, Recife, Pernambuco, Brazil
Tel.: +55 81 87955755; Zip code: 52011-260; E-mail: bmguimaraes@hotmail.com

It was with pleasure that I accepted the opportunity to put together this special section on Ergonomics and People with Disabilities for *WORK: A Journal of Prevention, Assessment & Rehabilitation*. This journal is an important publication for this subject and this special section aims to present research that uses the knowledge of ergonomics to facilitate the social and labor inclusion of people with disabilities.

Importance of the topic

People with disabilities account for about 15% of the world population, or one billion people [1]. Within this context, the inclusion of this population in the social-labor environment has been widely discussed and encouraged by various laws [2].

Data from several countries show that employment rates of People with disabilities are smaller than the general population [1]. A recent study showed that in 27 countries the employment rate for working-age people with disabilities, on average, was at 44%, and it was over half of that for people without disability (75%) [3]. Unfortunately, workers with disabilities are very often seen as a problem to be dealt with instead of an opportunity that can be used [4].

Accordingly, it is verified that job accommodation to people with disabilities is a tough task that has encountered some difficulties, such as the lack of offering professional training to People with disabilities, the presence of architectural and organizational barriers and discrimination regarding People with disabilities functional potential [2]. Thus, it is essential to understand the interaction between People with disabilities and the elements of the work system [5].

The implementation of ergonomics for the labor inclusion of people with disabilities has not had a special or different focus to other applications; it will always look to adapt work to the characteristics of people [2]. Chi [6] mentions that an accurate and detailed evaluation should take place, focusing on two important aspects, one concerning the individual evaluation, which consists of one's interest in the work, one's skills and disabilities which could affect the performance on the jobs available; and another one based on the ergonomic aspects, such as job demands and the characteristics of the tasks.

Determining reasonable accommodations through the use of ergonomics is an important step in providing an environment of inclusion at the workplace for individuals with physical or mental disabilities. A successful work transition will require a disability-sensitive workplace free of physical, mental, and attitudinal barriers thus allowing an inclusive environment for all workers [7].

Thus, ergonomics is indispensable, since the adjustments to the job can be adequately performed through the knowledge of the task, of the physical, intellectual and organizational demands of the jobs and the determination of the functional capabilities of the worker with disabilities [5]. Besides, ergonomic principles have a fundamental role to increase the social and work participation of individuals with disabilities.

Special section overview

This special section will present eight papers on the topic of the importance of ergonomics to social and labor inclusion of people with disabilities. The section

starts with the paper developed by Almada and Renner, at the Feevale University, in the south of Brazil that focuses on taking the users' perspective to identify ergonomic and accessibility issues with public transport services for wheelchair users and people with reduced mobility. This is an important topic on this special section because full accessibility is an important tool to enable their integration into society and in the working environment.

Regarding attitudinal barriers, which are important factors that hinder employment and social inclusion of people with disabilities, Carvalho-Freitas, Souto, Simas, Costa, Santos and Marques, from Federal University of São João del-Rei and Federal University of Minas Gerais, Brazil, discuss willingness to work with people with disabilities in Brazilian university students. This research takes into account the student's perceptions about Brazilian Quota Law, the conceptions about disabilities, consequences of working with people with disabilities and the level of difficulty to job accommodation. Meanwhile, Brite, Nunes and Souza, from State University of Rio de Janeiro, Brazil, analyze the managers' conceptions about labor inclusion of people with disabilities in a corporate organization, with 5,000 employees.

Another important issue addressed in this special section are the methods that can be used to include people with disabilities in the workplace. Filgueiras, Vilar and Rebelo, from Beira Interior University and Ergonomics Laboratory of Faculty of Human Kinetics of Technical University of Lisbon, Portugal, present a methodology for professional integration of people with disabilities in service companies and industry. Guimarães, Martins and Barkokébas Junior, from Federal University of Pernambuco and University of Pernambuco, Brazil, present an evaluation of the construction jobs on the construction site of a water supply network so as to determine the profile of workers with disabilities who could perform these jobs and what adaptations are needed. The paper developed by Martins, Coimbra College of Health Technology, Physiotherapy Program, Portugal, aims to use the ICF to address facilitators and barriers to participation at work for people with disabilities. In this research, Martins explores key indicators of social participation, particularly related to work, among environmental and personal factors, addressed in ICF.

The subject of the adaptation of environments for people with disabilities is also addressed in this special section. The research of Paiva, Ferrer and Villarouco, from Federal University of Pernambuco, which was developed at Long Stay Institutions for the Elderly, seeks to identify configurations of these environment by seeking shortcomings and/or successful solutions, and comparing them to the laws in force and the needs of their residents. Also on this subject, the Sounding Board paper, developed by me, the guest editor, a discussion is held about the importance of using the principles of ergonomics on workplace adaptation to people with disabilities.

I hope you enjoy reading this section of *WORK* and are now enlightened by the potential and the importance of Ergonomics on job accommodation for People with Disabilities. Furthermore, I hope that this special section will contribute to social and labor inclusion of people with disabilities around the world.

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