

Guest Editorial

Work in Bangladesh

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We are very excited to introduce this Special Section focused on *Work in Bangladesh*. This section is a culmination of several years of work by researchers in Bangladesh who are striving to study the ergonomic conditions of workers in Bangladesh, with the ultimate goal of creating safer and healthier work sites and work practices for people in Bangladesh. We are especially appreciative of the extensive support and understanding provided by Dr. Karen Jacobs and the editorial staff assistants Victoria Hall and Elizabeth Auth.

The authors of this Special Section are predominantly young occupational or physiotherapists with less than 10 years since graduating with their Bachelor of Science degree in either Occupational Therapy or Physiotherapy. The field of occupational therapy is relatively young (the first graduating class about 10 years ago), and is growing as the profession expands their practice areas from the capital city of Dhaka to other parts of the country. The Bangladesh Occupational Therapy Association [BOTA] was recognized by the World Federation of Occupational Therapists [WFOT] as recently as 2000 [1]. The profession of Physiotherapy has had regular classes of physiotherapists graduating for about 20 years, so although this profession is more established, it is also still growing. The Bangladesh Physiotherapy Association [BPA] was

awarded full membership in the World Confederation for Physical Therapy in 2007 [2]. Occupational therapists and physiotherapists in Bangladesh are all working to address the health and safety issues for national workers. Most of the authors in this issue were Bachelor level trained clinicians and faculty who were working towards their Masters degrees as they develop as scholars. There are very few rehabilitation professionals in Bangladesh who are able to mentor young therapists in their scholarship journey. This *Special Section* is a step in the development of rehabilitation professionals as ergonomic scholars in Bangladesh.

The garment industry in Bangladesh drew international attention in 2013 with the collapse of the garment factory at Rana Plaza. The death toll was more than 1,100 workers and more than 2,500 workers sustained physical as well as emotional trauma injuries from being trapped in debris for days [3]. The very difficult working conditions of the garment workers in that factory was evidenced by the thousands of workers who were reportedly directed to report for work even though cracks had been reported in the building; the shops and bank in the lower levels of the building were closed on the day that thousands of workers reported to work as directed [4].

When examining the safe work practice laws in Bangladesh, injury prevention and worker safety is a part of the “Decent work in Bangladesh” Plan that was developed in close collaboration with the International Labor Organization [5]. This plan focuses on 12 key outcomes during the period of 2012–15. This Special

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Section, *Work in Bangladesh*, focuses on Outcome 3 of the “Decent work in Bangladesh” plan: “working conditions improved” [5]. This Special Section includes studies of paid industrial metal workers, sewing machine operators and office workers, occupational and physiotherapists in a rehabilitation center as well as unpaid household workers in a rural village. Studies also examine outcomes of a program for people who experience spinal cord injuries as they strive to return to productive work, and the outcome of a Community Based Rehabilitation Program focused on productivity of people with disabilities in a rural area that is otherwise devoid of rehabilitation services. The last study is a normative study of a very simple work-related fine motor task that begins to establish culturally relevant work rehabilitation norms for a country that has the 8th largest population in the world [6].

Bangladesh has experienced rapid growth in the economy due to increases in both the industrial and agricultural sectors. Both of these sectors involve a lot of manual handling situations, and the worker or employer does not necessarily have enough awareness, knowledge or experience to handle the difficult situations. Since 2013, Bangladesh has made a significant improvement in the Occupational Health and Safety (OHS) issues in industrial places, and is working on improvements after having several catastrophic disasters in the Ready Made Garment (RMG) industries. Even with these new policies in place, a large number of people are unprotected; this includes those who work for small businesses, those who do day labor on either farm sites, construction sites or boulder handling sites, or those working in the leather tannery districts [7].

This Special Section includes studies that include both male and female workers, although only one study has relatively equal participants from both genders. The predominant culture and religious expectations in Bangladesh include males usually working outside of the home and females mostly doing household activities. These expectations have changed recently, especially in cities, and women are now employed as therapists, in offices and especially in the garment industry. Sewing machine operators are currently predominately female in Bangladesh.

The study by Habib and Rahman explores the reported musculoskeletal problems experienced by women who are engaged in regular household activities as their full time work. The work that these women do on a daily basis is different than the work done in most developed countries. Access to modern domes-

tic appliances is very limited in both rural and urban environments. As a result most domestic chores are completed manually. This includes tasks such as meal preparation, household cleaning and washing. Most of women’s time is spent in the kitchen with meal preparation and cooking, which is mostly done on the floor level in a squatting, hunched over position. Common utensils used in a kitchen include a ‘boti’ (knife stabilized on the floor, but portable), a stone for grinding spices, and thin handled spoons. All of the kitchen utensils are used in the squatting position on the floor. Floors are swept using short handled brooms (from a squatting position) and are then manually washed with a cloth and water, with the family’s clothes. Clothes washing is done manually in buckets or in a river, once again in a hunched squatting position.

The trend of the Bangladeshi economy has been shifting from the predominant agriculture to massive industrialization and in particular to the garments industry. The garments industry is credited for improving prosperity of the national economy. This has happened rather quickly, and without proper occupational health and safety guidelines put in place for the workers. Habib describes an occupational therapy ergonomic intervention for the garment workers in a ready-made garment factory that was carried out by occupational therapy students. The particular factory where this intervention occurred had been seeking out ergonomic advice and was interested in finding ways to improve worker safety without decreasing the productivity standards.

Like other countries, Bangladesh has also factory and labor laws to ensure safe and healthy workplaces for the wellbeing of the workers, but in reality due to laxity of the implementation of the law, most of the workplaces are not as healthy and safe as they could be. As a result, very often accidents such as fires and even building collapses occur. In the past, many deaths and injuries have happened in Bangladesh due to unsafe and unplanned workplaces. Moreover, there is no guaranteed disability insurance or compensation system for the workers if there is any sickness, accidents or injuries. Most of the time if there are accidental deaths, a lump sum amount of money is handed over to the family of the victims with no other benefits, but this is not a guaranteed benefit.

Work in factories usually begins at 8:00 am and workers are allowed a one hour lunch break at 1:00 pm, expected to be back at work by 2:00 pm. Workers then work until 5:00 pm unless there is mandatory overtime, when they work as long as required. There

are no scheduled breaks in the day at factory settings. Akter, Maruf and Chowdhury explored the problems that metal workers experience in several factories in the capital city of Dhaka. This is considered material management work, requiring physical lifting and carrying. Habib, Yesmin and Moniruzzaman studied workers in an office setting where the work involved was reading and editing papers by hand; the work was performed while sitting at tables (not computer work stations) using pens/pencils and papers.

Islam et al. studied occupational and physiotherapists that provided physical rehabilitation services at the large rehabilitation center in the capital city Dhaka area. The work in this study involved transferring patients and using physical handling techniques throughout the course of an 8 hour day, 5.5 days a week. The therapists' day included punching in to work at 8:00 am, a 15 minute tea break sometime between 10:00 am and 11:00 am, working until 1:00 pm when they had a one hour lunch break, and then they were back to work by 2:00 and stopped work at 5:00 pm.

The last three studies were descriptive, evaluative and normative studies. Ullah, Chowdhury and Sarker provide a descriptive study to determine the types of vocational training that people who had spinal cord injuries in Bangladesh chose to pursue as part of their rehabilitation program. Moniruzzaman, Saha and Habib provide an evaluative study to determine whether or not a student community based placement improved people with disabilities' productive work. The last study by Lindstrom et al. provides Bangladeshi norms that occupational therapists can use when evaluating someone's fine motor skills related to their ability to perform fine motor productive work. Prior to this study, the Bangladeshi occupational therapists have not had any relevant cultural norms to use for evaluation comparisons.

It is encouraging that over time, the safety situation in workplaces has improved in some of the reputable garments factories due to the pressure of international buyers. As a result, a few renowned garments companies are seeking ergonomic consultancy (for the wellbeing of the workers) from ergonomic professionals, but there are very few professionals trained in this field to meet the demand of huge needs. Ergonomic consultation services are not yet established or well-coordinated in Bangladesh. This Special Section: *Work in Bangladesh* is an initial step to establish literature about the current ergonomic conditions in different work settings and to motivate occupational therapists and physiotherapists in Bangladesh to seek specialized training in this area to address the worker safety situation in their country.

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