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Editor Note:

Ergonomics is defined as the study of people's efficiency in their working environment. This scientific discipline is concerned with understanding the interactions among humans and professions that apply theories, principles, data, and methods to design in order to optimize the human well-being and overall system performance. This discipline comprises of three main fields of research such as; cognitive, organizational, and physical ergonomics. The Journal of Ergonomics is an open access journal that aims to publish complete and reliable sources of the information. The present issue of Volume 6 Issue 5 published 3-Research articles, 2-Editorials, and 1-Commentry paper.

Basu et al. [1] indicated that the degree of pulmonary function decrement experienced by back pain load was dependent on both duration of the carriage and magnitude of load. Even gender variation plays a role in pulmonary function. For example, females are more susceptible to detrimental effects of back load than males. The increase in the load consequently increases the energy expenditure and oxygen consumption, which in turn increases the perfusion of air at the lungs. The Forced Expiratory volume in one second (FEV1) is decreased with increased load. This heavy load compresses the thoracic cavity that causes increased resistant to airflow. Finally, they concluded that females should carry load less than 10% of BW, whereas, men can carry up to 15% static load of BW for the time period of 15 minutes.

Sen and Ajita [2] reported the relation between musculoskeletal pains or discomforts associated with heavily loaded school bags. A treadmill test was conducted on 105 students walking with different loads such as right side, left side, and back loads, respectively. Heart rate was measured by a pulse oximeter and perceived exertion was measured by using the Borg's RPE scale in students after the treadmill walking for 20 minutes in all three categories. The results summarized that the treadmill walking with carrying loads on right, left and back pack increased Ratings of Perceived Exertion.

Al-Otaibi et al. [3] identified the physical risk factors and prevalence of upper musculoskeletal disorders (UMSDs) among aluminum factory workers in Saudi Arabia. A survey was conducted on 115 aluminum workers, based on work history, demographics, job performance, medical history, and pain. The results from this survey indicated that UMSDs were common in workers. Both joint and muscle pain is associated with physical risk factors such as pulling, pushing, and awkward motions. Muscle pain is generally associated with lifting. Thus, they finally concluded that risk factors were highly prevalent in the workers of aluminium factory and that they were strongly related to UMSDs.

Slip and fall safety of floors and floor coverings is usually measured by a concept of coefficient of friction (COF). COFs of the flooring are measured by a tribometer to assess its slipperiness. This instrument measures the tribological quantities such as COFs, frictional forces, and ware behaviours between two surfaces that are in contact. The commentary article of Masory et al. [4] provided the information on a new standard of F2508-13: "standard practice for validation, calibration and certificate of walkway Tribometers Using Reference Surfaces" adapted by American Society of Testing and Materials (ASTM) F13 committee for the pedestrian walkway Safety and Footwear.

References

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2. Sen S, Ajita (2016) Influence of Carrying Loads on Ratings of Perceived Exertion and Heart Rate during Walking. J Ergonomics 6: 176.
3. Al-Otaibi ST, Alabdulwahab Z, Abugad HA, Harber P (2016) Physical Risk Factors Associated with the Upper Extremity Musculoskeletal Disorders among Aluminum Manufacturing Workers. J Ergonomics 6: 78.
4. Masory O (2016) Comments on ASTM F2508–13. J Ergonomics 6: 177.