

## Different Ways of Carrying Bags in Mental Retarded Students

Saideh-Sadat Mortazavi\*<sup>1</sup>

Received: 1 Feb 2012

Accepted: 1 Oct 2012

Available online: 24 Oct 2012

1. Department of Occupational Therapy, Faculty of Rehabilitation, Hamedan University of Medical Sciences, Hamadan, Iran

School as an educational and social center is linked with various aspects of child's growth. The impact of objects, tools, and lifestyle on the development of human performance is not hidden from anyone [1].

Tasell Lauri, the head of Cairo Practive in Australia, in a paper warned parents about bags as a tool that students carry every day, and he is believes that many spinal disorders in adults is caused by childhood trauma. Studies on children and patients with special needs and such as myelomenangocele, cerebral palsy, and neurofibromatosis precisely show abnormal growth of spinal disorders, muscle imbalance, wrong posture [2]. Carrying stationery in an inappropriate tool can cause irreversible effects.

This study is aimed to determine the common ways of carrying bags in mental retarded students. In this study, after getting an official written permission from Organization of Education, with ethical principles of explanation and obtaining written consent, 40 students who used the school transportation services to commute to school aging from 7 to 11 years were randomly selected and were taken under observation.

Twenty-seven boys with the average age of  $8.28 \pm 0.197$  years, 13 girls with the average age of  $8.43 \pm 0.174$  years participated. 57.9% of the girls used backpacks, 26.3% used backpacks, and 15.8% carried handbags. Moreover, it was reported that among the boys 66.7% used handbag, 21.4% used backpacks, and 11.9% carried shoulder bag. Based on a  $\chi^2$  test, a significant relationship existed

between students' sex and the type of bags which they used.

Furthermore, 87.5% of the students expressed discomfort and pain in the limbs. A significant relationship also existed between the type of bag and discomfort while carrying it. Students who used backpacks experienced less discomfort compared with the other two types of bags. 93.2% of the female students and 85.2% of male students were dissatisfied while carrying the bags. Based on Fisher's exact test, a significant relationship existed between students' gender and discomfort while carrying bags. According to the results of this study, the type of students' school bag has a direct relationship with their health, especially in mental retarded students. Considering their weakness, their bags can naturally reduce their efficiency. Therefore, it is essential that the parents and managers of special education of retarded students pay special attention to this urgency.

According to scientific articles, physiological consequences of carrying backpacks are among the most beneficial methods and cause less discomfort. Because, in comparison with different ways of carrying bags, carrying bags in a standard form and using both shoulders with a balanced weight, minimum physiological changes are caused [3].

Corresponding author: [s.mortazavi.ot@gmail.com](mailto:s.mortazavi.ot@gmail.com)

© 2012 Zahedan University of Medical Sciences. All rights reserved.

### References

1. Mohamed-Thariq MG, Munasinghe HP, Abeyssekara JD. Designing chairs with mounted desktop for university students: Ergonomics and comfort. *Int J Industrial Ergonomics* 2010; 40(1): 8-18.
2. Tasell L. Parents wanted of school bag danger. *Sunday bulletin of chiropractors. Aust Assoc* 1999; 2: 5-9.
3. Hosseini SH, Daneshmandi H, Rahmani F. Comparing the physiological effects of three different models of ergonomic handling of bags school students. *Olympic Fall* 2009; 17(3): 65-74.