The Effects of Heavy Back Pack on Young Children

Lisa (First M. Last)

School or Institution Name (University at Place or Town, State)

1. Wiersema, B. M., Wall, E. J., & Foad, S. L. (2003). Acute backpack injuries in children. Pediatrics, 111(1), 163-166.

Wiersema and fellows seek to study the mechanism of the injuries due to backpacks full of books among the school children with the aim to develop the strategies that could prevent these injuries. The injuries from backpacks end up the school-aged children in the emergency departments of hospitals. Considering the data obtained from CPSC NEISS (National Electronic Injury Surveillance System) almost 65 injuries are due to wearing, taking off, and lifting backpacks.

The authors are aware of the limitation of their study as it only focuses on the acute injuries due to backpacks which lead the children to emergencies. The data does not consider the differences between single and double strap backpacks. In addition, it also does not count the major and minor injuries treated elsewhere such as physician office. Overall, it highlights that tipping over a backpack a common mechanism and head injury as a common form of injury caused by wearing backpacks. It makes the contribution to the study that backpacks can be a factor in injuries among school children, which makes it helpful.

1. Aundhakar, C. D., Bahatkar, K. U., Padiyar, M. S., Jeswani, D. H., & Colaco, S. (2015). Back pain in children associated with backpacks. Indian Journal of Pain, 29(1), 29.

The authors and researchers Aundhakar, Padiyar, Jeswani, and Colaco studied the factors that result in the back pain among the school mainly focusing on back pain as one of the contributors of back pain. The school children of age group 12-16 were investigated for this purpose and data was obtained regarding the severity of back pain and student weight ratio to backpack weight, mode of transportation and occurrence of musculo-skeletal pain. The results obtained from the study indicated that most of the school children reporting back pain carry backpacks of weight higher than that of their body weight. In addition, students who walk to school carrying backpacks also report the prevalence of back pain. It has implications for the medical and educational community to begin teaching parents about the adverse impacts of carrying heavy backpacks. Walking to school carrying heavy backpacks especially heavier than that body can bear results in severe back pain and therefore parents must take part in preventing these incidents. It also supports the idea that heavy back packs do not produce favorable outcomes for the children.

1. Chen, Y. L., & Mu, Y. C. (2018). Effects of backpack load and position on body strains in male schoolchildren while walking. PloS one, 13(3), e0193648.

Considering the previous studies which report the negative consequences of carrying a heavy backpack among the school going children, Chen and fellows studied the impact of backpack load on body posture, discomfort score, and muscle activation. They employed 12 male school children who were generally healthy having no muscular issues. Their postures were recorded and they were let free in comfortable clothes. Authors did not find the results of their study in uniformity with the preceding studies which studied posture and discomfort level. Though they found that carrying a backpack with weight less than 10% of the actual body weight and at the right position can be acceptable for school going boys, however, it is not feasible in case weight is more than 10% of the body weight. It also identified a position in which carrying a backpack is suitable out of three positions on which the sample was studied. This research also contributes to the study that carrying back can be harmful to school children, however, it has limitation because the sample size is very small.

References

Aundhakar, C. D., Bahatkar, K. U., Padiyar, M. S., Jeswani, D. H., & Colaco, S. (2015). Back pain in children associated with backpacks. Indian Journal of Pain, 29(1), 29.

Chen, Y. L., & Mu, Y. C. (2018). Effects of backpack load and position on body strains in male schoolchildren while walking. PloS one, 13(3), e0193648.

Wiersema, B. M., Wall, E. J., & Foad, S. L. (2003). Acute backpack injuries in children. Pediatrics, 111(1), 163-166.