109 - EVALUATION OF BODY WEIGHT IN RELATION TO THE BACKPACK SCHOOL IN TWO SCHOOLS OF PUBLIC AREA OF NORTH PORTO ALEGRE

TATHIANA BLOISE;
THAIS BARSKI;
DÉBORA RIOS GARCIA
Instituição Educacional São Judas Tadeu, Porto Alegre, RS, Brasil.
tathi_bl@hotmail.com

doi: 10.16887/85.a1.109

INTRODUCTION

The backpack is used as a longstanding method of transporting school supplies for students at different stages of life and had a significant increase in the current year for facilitating the mobility of students as this prey on the posterior region of the body allowing for hands- free .It is known that overweight found in the backpacks and improperly transport is one of multifactor providing changes and pain in the spine, the load of the backpack when over 10% of body mass contributes to postural deviations and pains, taking into consideration that school every day carry the weight of material on the shoulders to that over the years this weight increases as the curriculum is essential care to overweight in order to prevent irreversible damage to spine. This shipment of overweight in the posterior region of the trunk can be associated with back pain and postural deviations appearing in different stages of life of the individual is a child, adolescence or adulthood in their Candotti (2012).

Taking into consideration that the school period is the stage where the child is in full development skeletal muscle and this transformation occurs in an accelerated manner is necessary to pay attention to possible causes of deviations from this pattern, so it is necessary to implement policies public health school where there is oversight of backpacks as recommended by WHO that refers to 10% of the body weight of the child.Given the importance of this issue for the health of the individual in the full development of their bodily structures governmental entities of Rio Grande do Sul created the STATE LAW No. 12,027, which establishes the maximum tolerable weight of material conveyed school not exceeding 5% of the weight body for students of early childhood education and 10% to elementary students, and mUNICIPAL LAW No. 9507 with one paragraph that limits the weight by 10% related to the student's body weight César (2004 apud Falsarella; BOCCALETTO; LAMB) tells us that , incorrect postural habits, adopted since the early years of schooling, are cause for concern. Because children meet in the growth process, they are more subject to deformation.

It is necessary to guide and intervene in the habits and activities of the school during this period of life which is where the individual develops body awareness, having a sense of your body as a whole in order to prevent future injuries and pain caused by overweight school backpack is carried on the shoulders for long periods. The school community such as teachers, principals and parents should be allies in control of the load of the backpack for the student to have a healthy use during school life.

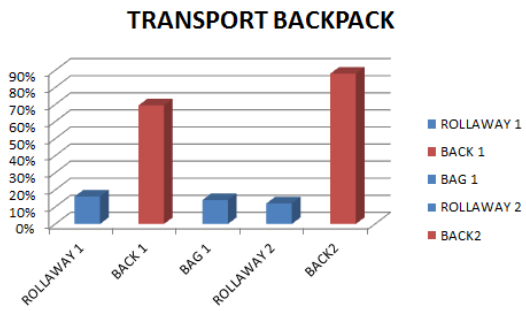
Therefore the present study aims to assess the weight and the mode of transportation of school supplies in state schools in the north of Porto Alegre to find out if their backpacks used within the maximum weight suggested by WHO and allowed by Law Nº 2772/97.

DESIGN METHODOLOGY

It is an analytical-descriptive concerned with identifying the weight of the backpack of school of elementary school cross-sectional observational study. The weight of school supplies was obtained by taking two measurements. Initially, participants on reaching the evaluation room with all your stuff will be heavy. Then they put aside the material and will be weighed again. From this information you can check the proportional weight of the material in relation to body weight. For this procedure, a digital scale Filizola with 100g precision will be used.

The proportional weight of school supplies will be categorized as less than 10% and greater than 10%, according to the values proposed by Hong and Brueggemann (2000 apud RITTER, 2009) and this variable will be called health criteria for the transportation of school supplies.The study included 157 students from two public schools in the North of Porto Alegre, all students from 1st to 4th year of elementary school. The participants were aged from 6 to 13 years. Students' participation in the survey agreed with the resolution 196/96 (BRAZIL, 1996) of the National Health Council (CNS), using the Term of Consent where to collect the data was used " instrument for Knowledge Perception of Students on Posture Adopted in School Environment - POSPER " (RITTER; SOUZA, 2006 apud RITTER, 2009), adapted for this study.

RESULTS AND DISCUSSION



Graph 1 - Distribution what type of backpack is mostly used by students for transportation of school supplies.

As chart 1 the most common form to carry school supplies backpack is the overlapping of the two shoulders in both school was so prevalent that 01 is 70% of the students in school use this form while in school 02 88% of students are adept at this form of transport. The transport through rollaway backpack is mostly used by children and the 1st 2 years and 16% of the students prefer the 1 and 12% of the 02 school use this form, there are also students who use bags to transport this form generally preferred by girls between 4 and 5 years totaling 14% of this form was found only in 01 schools.

According Candotti et al. (2011), students of 2nd year (60%) and 5 years (77.3%), and Sheir-Neiss et al. (2003) 87.6% were carrying backpacks using the straps on both shoulders. In the study by Moura et al. (2009) 88% of 4th graders from public

schools use the backpack causing hyperlordosis. Aparicio et al (2005) evaluated the mode of transportation of school backpack 203 school children from the city of Salamanca (Spain), found that virtually all of the assessed used the backpack with two shoulder straps. It is observed that 45.8% of students in this study carried more than 10%, of these, 8.3% were from public schools and 37.5% were from private schools. However, the results show is smaller than the results obtained in the research of Ferst (2004) and Grimmeret al (cited CARVALHO, 2004) After analyzing the questionnaires given to individuals in the sample, found that 15 students (68.2%) carry the school supplies above the 10% recommended by WHO. Gomes et al. (2011) says that in relation to the mode of transportation of the material, the prevalence was the backpack with two straps (64.29%). IN this study the choice of the majority of respondents are using the backpack over both shoulders.

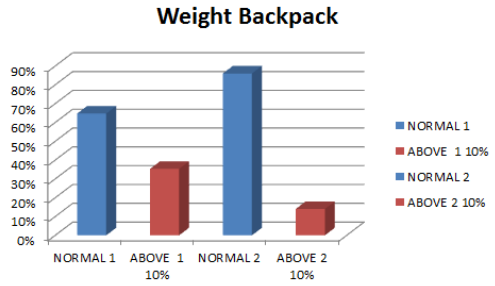


Figure 2: Comparison of the weight of the backpacks.

In Figure 2 we note that the two schools there is an overload on the Transport of school supplies being 01 to 35% of the students in the school were overweight over 10% of body weight recommended by WHO in school while 02% were overweight at 14 backpacks 65% of school children 01 and 86% of the students carrying 02 school supplies within the limit of 10% as recommended. Comparing schools perceive a noticeable difference on the weight between students of the two schools.

In the study by Viry et al. (1999) did not carry backpacks weighing more than 20% of body weight corresponding to 49% of children studied. According to the study by Silva sd, shows that 54.2% of 4th and 5th grade school have cargo within recommended levels, with 41.6% of those in public schools and 12.6% in private schools. Ferst (2004) and Grimmeret al (cited CARVALHO, 2004) after analyzing the questionnaires given to individuals in the sample, found that 15 students (68.2%) carrying school supplies above the 10% recommended by WHO. Almeida et al. (2006) analyzed the body weight and the weight of the school bag of 32 students from the 4th grade in a school, after noted that 69.57% carry the weight of the backpack above the law and that 30.43% carry the weight according the law. Araujo et al. (2012) noted that 45% of students tested showed greater overload than 10% established by law. Negrini, Carabalona and Sibilla et al. (1999) found that Italian children aged around 11 years carrying an average of 22% of their body weight as school supplies, with 34.8% of the subjects studied carried more than 30% of body weight. Ries et al. (2012) analyzed that 18% of the children in their carrying more than 10% BW backpack loads. In the present study it was found that most of the surveyed children with adequate weight is within the 10% allowed by the law of the pack.

CONCLUSION

Overweight knapsack to carry school supplies for students at different school levels has attracted the attention of the population in recent years due to the increase of the curriculum and extracurricular activities offered by schools and everyday situations also where the student stays for a long period away from home and need to carry not only the study material but others like coats, changes of clothes, lunch boxes, water bottles among other things required to stay away this period of your home.

This problem could be minimized with simple actions taken by schools as better distribution of curriculum uniting periods, lockers for students to leave the amount of material, and thus carry only what you need, extracurricular activities match the days of smaller volumes of material.

With the results obtained in this study can be seen that most children choose to transport the material correctly and most indicated by several authors is that with the backpack on the back of the superimposed over both shoulders torso, and the choice by backpacks with wheels is done with students of the lower grades 1st and 2nd years who fits due to the child's stature.We can observe the difference comes when schools refers to overweight in school 01 students carrying backpacks heavier than 02 school students this happens because the distribution grid and the provision of extra-curricular activities offered by schools serving children with differentiated economic profile one another. It was noted at the time of collection that students know the correct way to load the bag and claim the weight they carry some already showing remarkable postural deviations and complaints of pain in the spine. Teachers find it important to mention that this evaluation and the backpacks are really very heavy, but the school community does not adopt prevention methods and guidance to the students.

It was concluded at the end of this present study the importance of preventive public health actions within schools where involve the school community between parents, principals, teachers and students in order to guide, correct and prevent possible postural deviations related to overload the backpack and the mode of transport used by children.

REFERENCES

ARAÚJO, Danilo. O estudante e sua postura. 2007. Disponível em: <http://www.nossadica.com/saude_o_estudante_e_sua_postura.php> Acesso em: 02 maio 2014.

BLOG da ACC. Mochila pesada. 05 mar. 2010. Disponível em: <http://accfisioterapia.com.br/blog/mochila-pesada/>. Acesso em: 15 mar. 2014.

CANDOTTI, Claúdia Tarragô; NOLL Maria; ROTH Eliane. Avaliação do peso e do modo de transporte do material escolar em alunos do ensino fundamental. Porto Alegre, 2011. Disponível em: <http://webcache.googleusercontent.com/search?q=cache:jZ14alfw18YJ:www.scielo.br/pdf/rpp/v30n1/15.pdf+&cd=5&hl=pt-BR&ct=clnk&gl=br>. Acesso em 20 set. 2014.

CARVALHO, Priscila de; AUDI, Soraya Garcia. Verificação do peso das mochilas escolares utilizadas por estudantes universitários do curso de fisioterapia de uma instituição da rede privada do município de Osasco. São Paulo, 2009. Disponível em: <http://www.fiepbulletin.net/index.php/fiepbulletin/article/view/1117>. Acesso em: 21 ago. 2014

MOURA, Bruna Morais de; FONSECA Charlene de Oliveira; PAIXÃO Taynã Feliz. Relação quantitativa entre o peso da mochila escolar x o peso da criança e suas possíveis alterações posturais e algias. Belém, 2009. Disponível em:

<http://www.unama.br/novoportal/ensino/graduacao/cursos/fisioterapia/attachments/article/131/analise_quantitativa_peso_mochila_peso_crianca_algias.pdf>. Acesso em: 13 ago. 2014.

RÊGO, Joseany Soares; GOMES, Karla Sabrina Ribeiro; LIMA, Marcus Vinícius Viégas; LIMA, Fernando César Vilhena Moreira. Postura e ambiente escolar. 13 nov. 2006. Disponível em: <http://www.jornalpequeno.com.br/2006/11/13/Pagina45554.htm>. Acesso em: 05 mar. 2014.

RITTER, Alexandre Luis da Silva. Postura corporal ao sentar e transportar material escolar. 2009. Tese (Doutorado) – Programa de Pós-Graduação em Ciências do Movimento Humano, Escola de Educação Física, Universidade Federal do Rio Grande do Sul, Porto Alegre, 2009. Disponível em: <http://www.lume.ufrgs.br/bitstream/handle/10183/18525/000730414.pdf?sequence=1>. Acesso em: 19 mar. 2014.

SILVA, Leilane de Aguiar. Análise da relação entre a massa corpórea e a massa das mochilas em escolares do 4º e 5º ano do ensino básico em Santarém-PA. 1999. Disponivel em: <http://www.portalbiocursos.com.br/artigos/ortopedia/99.pdf> Acesso em : 24 out. 2014.

Endereço: Amaragi, 156/104, Bairro: Cristo Redentor,
Porto Alegre- RS Cep: 91360190

EVALUATION OF BODY WEIGHT IN RELATION TO THE BACKPACK SCHOOL IN TWO SCHOOLS OF PUBLIC AREA OF NORTH PORTO ALEGRE

ABSTRACT

The bag has been used a long time as a method of transporting school supplies for students at different ages. It is known that overweight found in the backpacks and improperly transport is one of multifactor providing changes and pain in the spine, the load of the backpack when over 10% of body mass contributes to postural deviations and pains, taking into consideration that school every day carry the weight of material on the shoulders to that over the years this weight increases as the curriculum is essential care to overweight in order to prevent irreversible damage to spine. Taking into consideration the importance of public health policies in school this study was to evaluate the mode of transport and overhead school supplies in backpacks carried by children during their school years, sought to be identified children carry the weight of the backpacks close to 10% of body weight which is recommended by WHO and described in Law No. 9507/2004 Municipal and State Law No. 12,027 / 2003. A cross-sectional observational analytical and descriptive methodology was used to analyze the weight of the backpack of students in elementary school to two state schools in the Northern District of Porto Alegre. The sample consisted of 157 students from 1st to 5th grade elementary school where it was found that 78% of students carry their stuff in two backpack straps, 15% carry in backpacks on wheels and only the students of 1st and 2nd year use the training wheels creeping form puts the rest back and 8% choose to use grants, 75% of the students carry the appropriate weight within 10% provided by law and 25% exceed the estimated weight. We conclude therefore that students carry on weight during their school life.

KEYWORDS: backpack weight, child

ÉVALUATION DE POIDS DANS RAPPORT À L'ÉCOLE SAC À DOS DANS DEUX ÉCOLES DE ZONE PUBLIQUE DU NORD PORTO ALEGRE

RÉSUMÉ

Le sac a été utilisé depuis longtemps comme une méthode de transport de fournitures scolaires pour les élèves de différents âges. Il est connu que l'on trouve dans les sacs à dos en surpoids et transporter mal est l'un des multifactorielle fournir changements et des douleurs dans la colonne vertébrale, la charge du sac à dos lorsque plus de 10% de la masse corporelle contribue à des écarts et des douleurs posturales, en tenant compte que l'école chaque jour porter le poids de la matière sur les épaules de qui au fil des ans ce poids augmente à mesure que le programme est des soins essentiels à surpoids afin d'éviter des dommages irréversibles à la colonne vertébrale. Prenant en considération l'importance des politiques de santé publique à l'école cette étude était d'évaluer le mode de transport et les frais généraux fournitures scolaires dans des sacs à dos portés par les enfants au cours de leurs années d'études, a cherché à identifier les enfants portent le poids des sacs à dos près de 10% du poids du corps qui est recommandé par l'OMS et décrit dans la loi n ° 9507/2004 municipal et la loi n ° 12027 Etat / 2003. Une méthodologie analytique et descriptive observationnelle transversale a été utilisé pour analyser le poids du sac à dos des élèves à l'école primaire de deux écoles de l'Etat dans le district nord de Porto Alegre. L'échantillon était composé de 157 élèves de première à cinquième école primaire de qualité où il a été constaté que 78% des élèves portent leurs trucs dans deux sangles de sac à dos, 15% portent des sacs à dos sur roues et que les étudiants de 1ère et 2ème année utiliser les roues de formation reptiles forme met le dossier et 8% choisissent de recourir à des subventions, 75% des élèves portent le poids approprié dans 10% prévu par la loi et 25% dépassent le poids estimé. Nous concluons donc que les étudiants portent sur le poids au cours de leur vie scolaire.

MOTS – CLÉS : poids du sac à dos, enfant

EVALUACIÓN DE PESO CORPORAL EN RELACIÓN CON LA MOCHILA ESCOLAR EN DOS ESCUELAS DE ZONA PÚBLICA DEL NORTE PORTO ALEGRE

RESUMEN

La bolsa se ha utilizado desde hace mucho tiempo como un método de transporte de material escolar para los alumnos de diferentes edades. Se sabe que el sobrepeso se encontró en las mochilas y transportar indebidamente es uno de los factores múltiples que proporciona cambios y el dolor en la columna vertebral, la carga de la mochila cuando más del 10% de la masa corporal contribuye a desviaciones posturales y dolores, teniendo en cuenta que la escuela todos los días a llevar el peso del material en los hombros para que a lo largo de los años este peso aumenta a medida que el plan de estudios es la atención esencial al sobrepeso, a fin de evitar daños irreversibles a la columna vertebral. Teniendo en cuenta la importancia de las políticas de salud pública en la escuela este estudio fue evaluar el modo de transporte y los gastos generales de la escuela suministros en mochilas realizadas por los niños durante sus años escolares, tratado de identificar los niños llevan el peso de las mochilas cerca del 10% del peso corporal que está recomendado por la OMS y se describe en la Ley N ° 9507/2004 Municipal y la Ley del Estado Nº 12.027 / 2003. Una metodología analítica y observacional descriptivo de corte transversal se utilizó para analizar el peso de la mochila de los estudiantes en la escuela primaria a dos escuelas públicas en el Distrito Norte de Porto Alegre. La muestra estuvo constituida por 157 estudiantes de 1º a 5º grado de la escuela primaria donde se encontró que el 78% de los estudiantes llevar sus cosas en dos correas de la mochila, el 15% llevan en mochilas en las ruedas y sólo los estudiantes

de primero y segundo año utilizar las ruedas de entrenamiento que se arrastran forma pone el respaldo y el 8% opta por utilizar las donaciones, el 75% de los estudiantes a llevar el peso apropiado dentro del 10% prevista por la ley y el 25% excede el peso estimado. Concluimos, por tanto, que los estudiantes llevan en peso durante su vida escolar.

PALABRAS – CLAVE: peso de la mochila, niño

AVALIAÇÃO DO PESO CORPORAL EM RELAÇÃO À MOCHILA ESCOLAR EM DUAS ESCOLAS DA REDE PÚBLICA DA ZONA NORTE DE PORTO ALEGRE

RESUMO

A mochila vem sendo utilizada a longa data como método de transporte do material escolar dos alunos em diferentes idades. Sabe-se que o sobrepeso encontrado nas mochilas e a forma incorreta do transporte é um dos multifatores que proporcionam alterações e dores da coluna vertebral, a carga da mochila quando ultrapassa os 10% da massa corporal contribui para desvios posturais e dores, levando em consideração que os escolares transportam diariamente o peso dos materiais sobre os ombros que ao decorrer dos anos este peso aumenta conforme grade curricular é fundamental o cuidado com o sobrepeso como forma de prevenção de lesões irreversíveis a coluna. Levando em consideração a importância de políticas publicas de saúde na escola este estudo teve como objetivo avaliar a forma de transporte e a sobrecarga do material escolar carregado nas mochilas pelas crianças durante seu período escolar, procurou-se identificara se as crianças transportam o peso das mochilas próximo dos 10% sobre o peso corporal que é recomendado pela OMS e descrito na Lei Municipal nº 9507/2004 e Lei Estadual n° 12.027/2003. Foi utilizada a metodologia observacional transversal analítico- descritiva para analisar o peso da mochila dos alunos do ensino fundamental I de duas escolas estaduais da Zona Norte de Porto Alegre. A amostra foi composta por 157 alunos do 1º ao 5º ano do ensino fundamental onde verificou- se que 78% dos alunos transportam seu material em mochila de duas alças, 15% transportam em mochilas de rodinhas sendo que somente os alunos do 1º e 2º ano utilizam as rodinhas de forma rasteira o restante as coloca nas costas E 8% optam pelo uso de bolsas, 75% dos alunos participantes carregam o peso adequado dentro dos 10% previsto em lei e 25% ultrapassam o peso estimado. Conclui-se assim que os alunos carregam sobre peso durante sua vida escolar.

PALAVRAS-CHAVE: Peso, Mochila, alunos.