

ALLERGIC AND ASTHMATIC CHILDREN IN 21ST CENTURY SCHOOL

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Abstract: *The paper presents results obtained through research conducted in the environment of selected primary schools. The research focused on whether, and to what an extent, teachers are aware of the fact that they may have allergic or asthmatic children in their classrooms, and what types of allergies are involved. It was further examined what the teachers knew of such immunity disorders, and whether they would be able to give first aid to a pupil in case of a fit. Moreover, it was established that in most cases, the school environment is adapted so as not to cause health issues in students unnecessarily. The research shows that teacher awareness needs to be improved. The teachers themselves would apparently like to know more about these issues.*

Keywords: *teachers, primary school environment, allergic children, asthmatic children, health problems.*

Introduction

In the Czech Republic, allergic ailments afflict approximately 30% of children, asthma some 7% of children. Asthma bronchiale is one of the most frequently encountered chronic diseases of childhood age.

Children with allergies and asthma spend a substantial part of their time at school, and the school thus ought to strive to prevent and alleviate their health problems. The teachers also ought to be well informed and trained so as to be able to assist such pupils should there be an acute turn for the worse.

Our research aimed to establish:

- ⇒ whether class teachers are aware of the number of their allergic and asthmatic pupils;
- ⇒ whether the teacher is able to give first aid to a pupil developing a violent allergic response;
- ⇒ whether the teacher is able to give first aid to a pupil having an asthmatic fit;
- ⇒ whether schools provide adequate conditions for allergic pupils so as to prevent unnecessary health problems.

Material and methods

For the purpose of the research, twelve primary schools were selected at random: four in Brno, four in a former district city some 40 km far from Brno, and four smaller village schools. The research was conducted between April 2007 and January 2008, and consisted of two parts. In the *first part* of the research project, class teachers (a total of 237) were given anonymous questionnaires consisting of four questions which they answered in writing depending on their knowledge/awareness of the health status of their pupils.

In the second part of the research project, conditions at the school were assessed by means of observation (at each school: 1 classroom junior school (Grades 1–5), 1 classroom middle school (Grades 6–9), natural science classroom, gymnasium).

Questions for class teachers, and their assessment:

The questions were answered by a total of 237 class teachers. The assignment was as follows:

1. *Do you know how many allergy and asthma sufferers you have in your class? (yes/no – number)*
2. *Are you able to give aid to a child with a violent allergic reaction? (yes/no)*
3. *Are you able to give aid in case of an asthma attack? (yes/no)*
4. *Do you give any consideration to pupils with allergies in the creation of the environment in the classroom (selection of plants, aids, wiping the blackboard with a dry cloth, etc)? (yes/no).*

Items examined in the second part of the research project:

- ⇒ the presence of a blackboard
- ⇒ dry cloth used to wipe the blackboard
- ⇒ carpet in the classroom
- ⇒ curtains/drapes
- ⇒ dust on lockers/aids
- ⇒ overall standard of cleaning in the classroom
- ⇒ live animals in the classroom
- ⇒ inappropriate (allergenic) house plants
- ⇒ the gymnasium - overall standard of cleaning (dusty exercise equipment, mats).

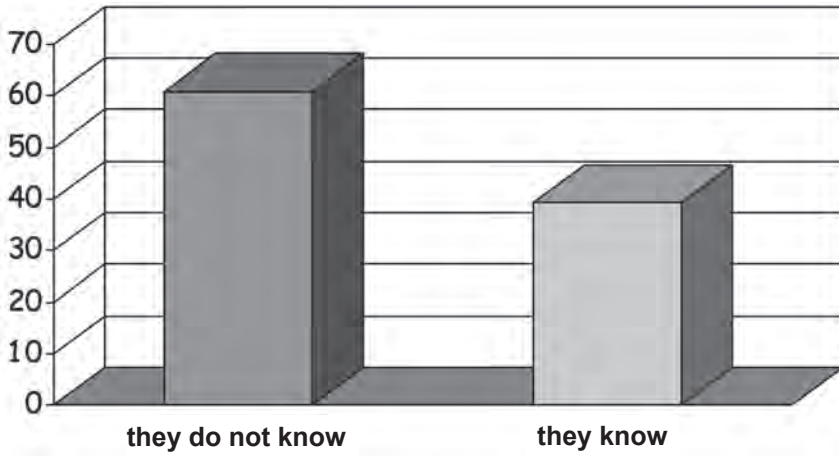
Hypotheses

- H_1 most class teachers will be informed of the number of allergy and asthma sufferers in their class
- H_2 teachers will know how to give aid to a pupil with a violent allergic reaction
- H_3 teachers will know how to give first aid to a pupil with an asthma attack
- H_4 the school environment will be significantly adapted to suit allergic pupils.

Questions for class teachers, and their assessment:

1. Do you know how many allergy and asthma sufferers you have in your class? (yes/no – number)

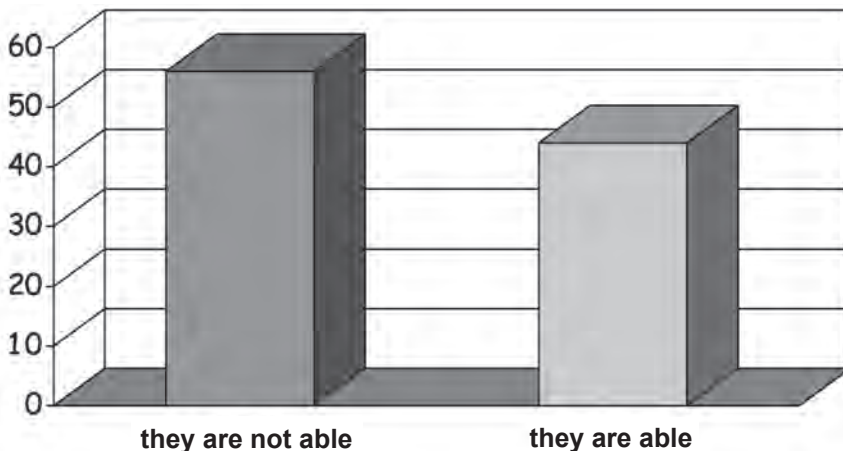
Two thirds of class teachers do not know if they have any allergic or asthmatic pupil in their class, one third has some general (und very uncertain) knowledge, does not know specific figures. *Only 5 teachers (2%) keep records and know the figures accurately. That is a highly alarming finding.*



2. Are you able to give aid to a child with a violent allergic reaction? (yes/no)

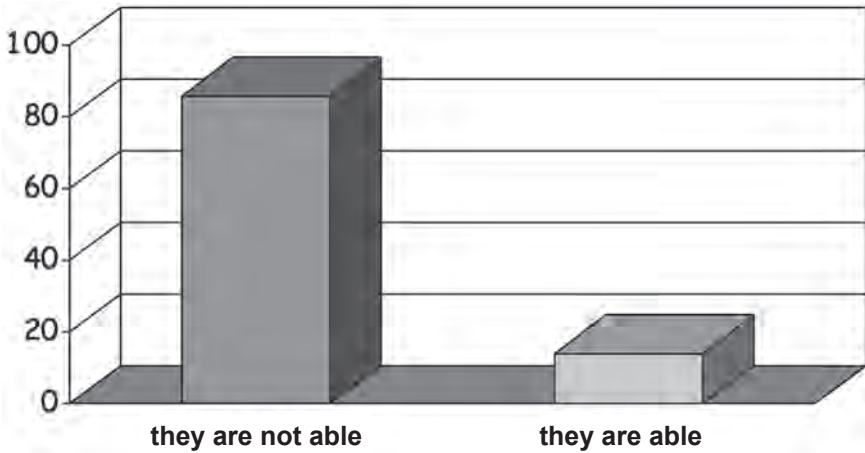
More than 50 % of the teacher would not be able to give first aid to a child suddenly stricken by allergic reaction. 44 % of the would be able to give first aid to the child.

First aid in this case able to reliably provide 44% of respondents.



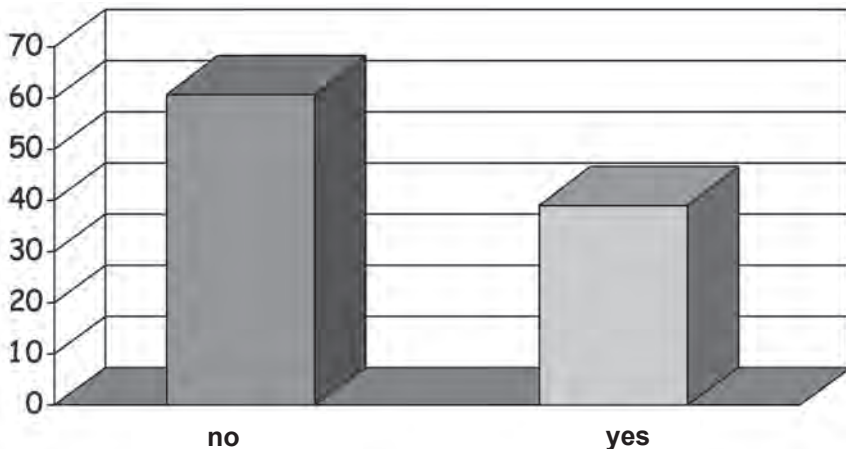
3. Are you able to give aid in case of an asthma attack? (yes/no)

Virtually 86 out of 100 respondents would not know how to give first aid to a child having an asthma attack. *Only 14% could provide reliable first aid in this case.*



4. Do you give any consideration to pupils with allergies in the creation of the environment in the classroom (selection of plants, aids, wiping the blackboard with a dry cloth, etc)? (yes/no).

Almost two thirds of teachers make no concessions to allergic pupils because they have not observed any problems as yet. While the rest of the respondents do not take measures specifically designed to create an environment suitable for allergy sufferers, they have encountered situations where due to a pupil's allergy, a carpet, plant or animal had to be removed from the classroom. More than one tenth of the group has directly witnessed an allergic reaction in a child.



Further findings – assessment of conditions at school:

1.

- ⇒ *a blackboard* was found at most primary schools, in junior and middle school classrooms and natural science classrooms, *as was the dry cloth* used to wipe the blackboard
- ⇒ *a carpet* was found in most junior school classrooms, and was always inadequately maintained, i.e., dusty (in three classrooms, there were swirls of dust around the carpet and in the corners of the room; the children had their pillows placed on such a carpet)

2.

- ⇒ *curtains* were found in 10 classrooms, very dusty, not washed in months
- ⇒ *drapes* were not found at any of the primary schools
- ⇒ *lockers and aids* were found to be dusty in 12 junior school classrooms
- ⇒ *overall cleaning standard* was not suitable for an allergic child
- ⇒ the biggest disorder and layers of dust were mostly found around and on top of the teacher's desk

3.

- ⇒ *in middle school classrooms*, the general standard of cleaning was significantly better, lockers and aids were dusty only in isolated cases
- ⇒ *in natural science classrooms*, lockers and aids were dusty, i.e., inadequate cleaning standards were found only in classrooms with a high number of stuffed animals on display
- ⇒ of unsuitable *allergenic plants*, many of the junior school classrooms featured dieffenbachia, poinsettia (*Euphorbia pulcherina*), in middle school classrooms, also poinsettia, croton, tenura, monstera and asparagus.

4.

- ⇒ no *live animals* were found in any of the classrooms examined
- ⇒ *gymnasiums, including the locker rooms and the rooms housing equipment*, were well maintained at all the schools visited (equipment, mats well dusted, clean floors), without significant risks from the point of view of an allergic person.

Brief summary of facts

- 1) **We had expected that most teachers would be informed whether and how many allergic and asthmatic children they have in their classes. This presumption was not confirmed.** On the contrary, the results indicate that most class teachers do not know for certain who in their class suffers from an allergy of some kind or from asthma. This is a highly surprising fact given that the number of allergic children is on the rise, they spend a substantial portion of their time at school, go on school trips, etc. The teacher thus definitely should be aware of the health status of his/her pupils, where other illnesses are concerned as well.

- 2) **We had expected that most teachers would be able to give first aid to a pupil manifesting a violent allergic reaction.** However, our findings show that 56% of teachers cannot be relied on to give such first aid, **and this presumption was thus not confirmed, either.**
- 3) **We had expected that most teachers would be able to give first aid to a pupil having an asthma attack.** However, our findings show that 86% of teachers cannot be relied on to give such first aid, **and this presumption was thus not confirmed, either.**
- 4) **We had expected that teachers would create adequate conditions at school for their allergic pupils so as to prevent unnecessary health problems. However, not even our forth presumption was confirmed** because most teachers answered that they do not take any extra measures to create an environment suitable for allergy sufferers (stating that they have never observed any problems in their pupils). The question remains whether they have really never encountered any allergies (which does not seem likely given the high number of allergy sufferers in the current population), or whether they have insufficient knowledge of these ailments, or whether some other facts are at play here. A smaller number of teachers stated that they do create an environment suitable for an allergic pupil but only when a pupil manifests health problems; they may then for instance remove an unsuitable plant, carpet, animal, etc.
- 5) **In the part of the research project where we observed and assessed work conditions for allergy sufferers, we had expected that the school environment would be well suited to these pupils. This presumption was not confirmed, either.** No significant differences were found between urban and village schools (urban schools placed very slightly better in the evaluation).
- 6) **Greater differences were obvious in the comparison between junior and middle school:**
 - in junior school, conditions unsuitable for allergy sufferers were found more frequently, also in terms of overall cleaning standard
 - the condition of some of the classrooms was alarming (mainly dusty aids, books, carpets and curtains)
 - while classrooms are cleaned on a daily basis, the cleaning is generally limited to the emptying of the wastebasket and washing of the floor; more thorough cleaning was found to be taking place in middle school classrooms and natural science classrooms
 - a low occurrence of allergenic plants was found, there were no live animals in any of the classroom
 - gymnasiums placed best in the assessments – they were clean, and so were equipment and mats.

Conclusions

- Our results naturally cannot be generalized and applied to all the elementary schools as only a selected sample was examined. As the selection was random, it may provide a certain idea of what the situation is like at elementary schools.
- When we spoke to the teachers, we discovered what their wish was: to have an aid (handbook) that would provide them with brief and concise information on allergies and asthma, as well as basic information on first aid to be administered to a pupil experiencing an asthma attack or a violent allergic reaction.
- The creation of such a handbook will be an important task for the faculty of Department of Family Education and Health Education.

ALERGICI A ASTMATICI VE ŠKOLE 21. STOLETÍ

Abstrakt: Práce prezentuje výsledky získané výzkumnou sondáží do prostředí vybraných základních škol. Bylo zjišťováno, zda a do jaké míry jsou učitelé informováni o tom, že mají ve třídách alergické či astmatické dítě a o jaký typ alergie se u školáka jedná. Dále bylo zkoumáno, jaké jsou znalosti učitelů o těchto stavech poruchy imunity a zda by dokázali svému žákovi poskytnout první pomoc v případě, že by dostal záchvat. Navíc bylo zjištěno, že prostředí školy není ve většině případů uzpůsobeno tak, aby u žáků zbytečně nevyvolávalo zdravotní potíže. Z výzkumu vyplývá, že je nezbytné zlepšit informovanost učitelů. Ukázalo se, že sami učitelé by si přáli o této problematice vědět více.

Klíčová slova: učitelé, prostředí základní školy, alergické dítě, astmatické dítě, zdravotní potíže.