

STRESS IN SCHOOL

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Abstract: Contemporary lifestyle in modern society presents a large number of factors that determine our quality of life. These factors include the amount of time required to manage all our day-to-day tasks, the enormous demands posed by our working lives, our large number of leisure activities and our family duties. Modern technology confronts us with many external pressures of various kinds, which result in stressful situations and stresses that can also have a negative effect on our health. These factors are frequently present in childhood, and we are beginning to see stress among schoolchildren on a broader scale. Using a modified Stress Test (Křivohlavý, 2001) we determined the current level of stress among schoolchildren, revealed its cause, and looked for ways to alleviate symptoms of stress by means of exercise.

Keywords: children and young people, stress, health, sport and exercise

Introduction

In recent years there has been much speculation about stress in relation to changes in lifestyle, to globalisation, and to the post-modern society. Stress is becoming something of a phenomenon of our times, and is used as an explanation for practically anything at one time or another. Individuals are subject to stress, groups are subject to stress, and even society as a whole is subject to stress. Many scientific publications refer to the danger of stress in relation to serious illness, and to lifestyle diseases in particular. The effect of stress factors is being seen more and more frequently in places where we might least expect it, such as in children, and even in young children. Stress in school was one of the subjects of an extensive piece of research that we undertook at the Faculty of Sports Studies within the project “The Effect of Exercise on the Health of Children and Young People” (Blahutková et al., 2006).

The subject of the research

Stress is one of the most serious factors damaging human health. Křivohlavý (2001) considers the founders of stress theory to be I. P. Pavlov (experiments on animals), the American physiologist W. Cannon (the sympathoadrenal system under stress), H. Selye (a corticoidal conception of stress) and R. Lazarus (cognitive stress management).

Adverse influences (external and internal) operating on the personality can lead to burdensome situations in life, and are known as “stressors”. Demands made upon us that are either excessive or perceived as excessive, in relation to the degree of strength of the individual, create stress. We generally associate stress on a subjective level with dissatisfaction – distress, although certain internal tensions associated with experienced danger may induce a feeling of intense satisfaction, as is the case with adrenaline sports for example (Paulík, 2002). Stress is the primary consequence of a large number of negative reactions on the part of the organism that are triggered by negative emotions, the effects of which are observable in the organism as a change to the level of hormones in the blood (in particular adrenaline and noradrenaline) and external manifestations of the personality. This negative reaction on the part of the organism (see Figure 1) plays a large part in the loss of balance in life and changes in behaviour (apathy, aggression), which may lead to pathological changes in the organism (external manifestations) or to crisis.



Figure 1: Diagram of negative reactions of the organism

Stress has also been described in the physiological area (Cohen, 1978). One can defend oneself against stress and stressful situations if one is in good health and sufficiently “strong”.

Stress accompanies us throughout our lives and causes many people serious illnesses that may be mild in nature at the beginning, but later turn from psychosomatic illnesses into serious diseases that can endanger our health. Sport and exercise of all kinds play an invaluable role in relation to harmony and balance in our lives, since they can act as an important factor in health and psychological support (Blahutková et al, 2005). Coping strategies may be developed as a defence (Lazarus, 1966). Our ability to withstand stress is always, however, the result of a positive attitude to the possible management of stress and stressful situations.

Stress can, up to a point, be measured by diagnostic tools, particularly in the area of psychological processes, although this generally involves subjective feelings, making stress difficult to prove in this area. From the biomedical viewpoint, however, it represents a serious problem, which accompanies illnesses at their very beginnings and contributes to the patient’s worsening health. It is, therefore, extremely important for those with serious illnesses to keep thinking positively. An attempt at combining the area of feelings with physiological sensations appeared in the Stress Text presented to the public, following much discussion, by Selye (1993). His initiative was further developed to suit conditions in this country by Křivohlavý (1994), who presented his Physiological, Emotional and Behavioural Symptoms of Stress. The test is divided into three parts (as its title would suggest) and contains a total of 32 items for determining the level of stress. It has been standardised for the adult population.

The health of our organism can undoubtedly be influenced by exercise, which also contributes towards reducing stress and can be used to aid in the formation of cop-

ing strategies that help us to manage stressful situations at times of crisis. These facts can also be applied in the school environment, particularly in physical exercise lessons at school, which focus on health education in addition to other areas. Our attitudes towards our lifestyle are formed at school age (Mužik, Krejčí, 1997), and schools have a direct influence on children's health and ensuring their quality of life in this way.

Research methods

The given test had to be adapted for children in order for us to be able to use it. We first adapted the test for two age groups (questionnaire research among 1,000 children at primary schools in the Czech Republic selected at random). The test was shortened to 22 items for younger schoolchildren, and shortened to 26 items for older schoolchildren. The categories remained unchanged. The research conducted by the Faculty of Sports Studies determined physical fitness, while we also determined the numbers of overweight and obese children using the BMI index. We investigated leisure activities among the selected group and the potential causes of negative phenomena, including bullying at school, among the selected group. The research also included an investigation of teaching methods and tools used in school physical education. A total of 650 children from three selected primary schools (in Blansko, Rajhrad and Šlapanice) were addressed, of which 246 were younger schoolchildren (152 girls and 94 boys) and 404 were older schoolchildren (212 girls and 198 boys). Motor skills tests, measurements of height and weight, a leisure activities questionnaire, the Stress Test, and a personality questionnaire were conducted on the selected group. We requested the agreement of legal representatives and the co-operation of the principals of the primary schools concerned and their teachers and physical education teachers in order to carry out the research. Students on bachelor and masters degree programmes were engaged in the research, and doctorate students also helped carry out particular tasks. A total of 41 persons contributed to the research (including the statistical processing of the results). The results of the research are, as yet, available only for individual items, and we are presenting results in the areas of the testing of stress and its possible causes in our report.

Results and discussion

The findings we made in determining the level of stress in school were positive, and we can state that certain reports in the press indicating an enormous burden on schoolchildren, and on younger children in particular, do not correspond to the results of our research. In the category for younger schoolchildren we found only 29 children showing symptoms of stress, of which 15 were girls and 14 boys (Figure 2). We further investigated the causes of the symptoms of stress shown by all these children. In two cases their high points score can be accounted for by a reaction to serious illness, and this was confirmed by the parents. In the other cases we determined the reasons that may have caused the given situation in the form of an unstructured phenomenological interview. To our surprise a significant contribution to the level of stress seen was accounted for by an unsatisfactory family situation (the divorce of the parents), by the differing social conditions in which the children live, and in certain cases by illness (Figure 3).

Certain results, particularly in the area of physiological causes, indicated ongoing illness or illness that had been overcome (in one case this involved completed oncological treatment). Discussions with teachers revealed suspected alcoholism in the family or domestic violence. These facts cannot, however, be proven, and were rather the subjective feelings of the teachers, who in some cases bore out the level of stress without having seen the results of the research. The teachers and parents were acquainted with the results of the research following its completion. Subsequent feedback was seen in a number of cases (requests for help in seeking a solution from parents).

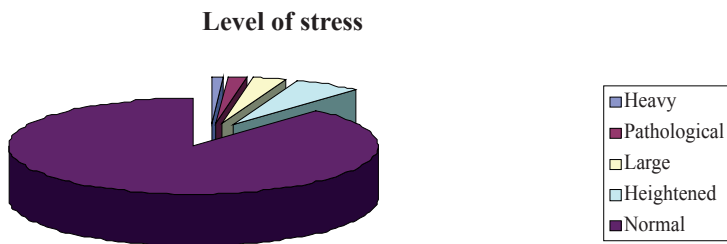


Figure 2: Chart of stress levels revealed among younger schoolchildren

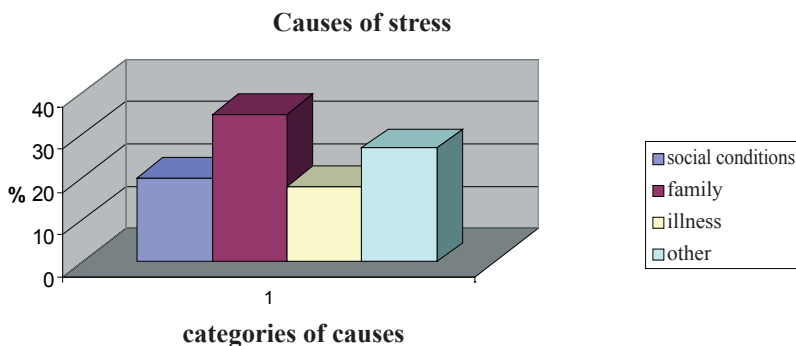


Figure 3: Chart of causes of higher stress levels found among younger schoolchildren

We reached extremely similar conclusions for older schoolchildren. The level of stress in school is not so intolerable as it is often presented. Only 4 children in this group showed signs of serious illness (incipient diabetes was later shown in one child). The level of stress was slightly higher among this group, although in view of the number of children addressed it remains at the level of normal stress (Figure 4). Girls showed a higher stress level percentage than boys (21 girls, 17 boys). A larger number of causes of stress were seen in this group, one being disproportionate expectations on the part of parents – the great demands resulting from the high aspirations of parents for their children, though these are also frequently the cause of defiance on the part of children. We also saw enormous demands on the time of these children caused by the number of leisure activities they are engaged in (some of the children do not have even one free day a week for

themselves and spend all their free time in hobby groups or taking part in activities held by organisations of various kinds). We also saw social inequality and incomplete families again. We discovered signs of hostile behaviour in a number of cases (Figure 5).

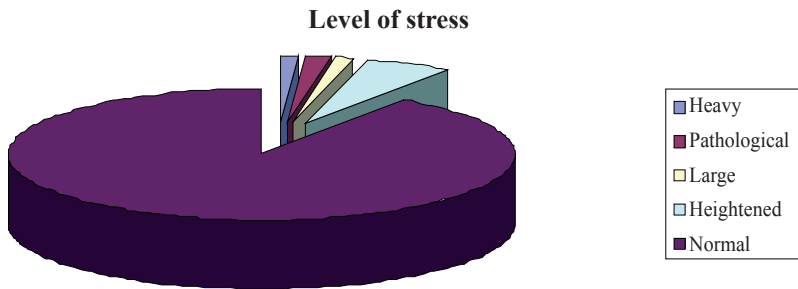


Figure 4: Chart of stress levels revealed among older schoolchildren

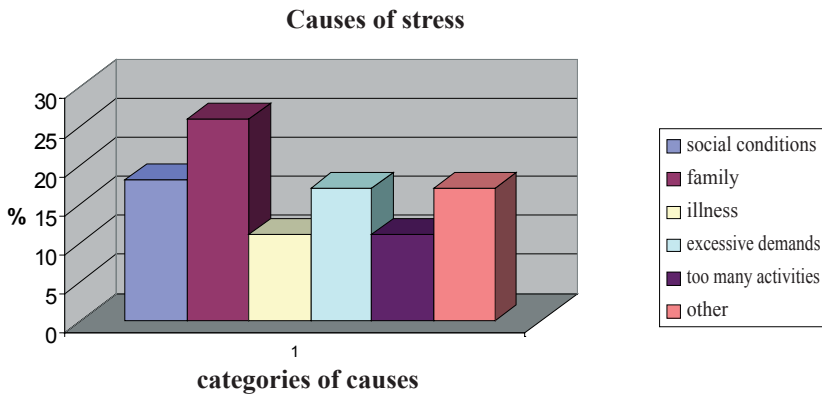


Figure 5: Chart of causes of higher stress levels found among older schoolchildren

During our conversations with teachers and the pupils addressed we found physical education in school and free-time sports and exercise activities to be popular. We found exercise to play a positive role in the development of coping strategies in the management of stress (we often heard phrases like “when I’m in a bad mood I go and do some sport, go out with my friends or go to the gym...”). Their teachers noted that the children were highly active during school physical education and pointed to the inclusion of untraditional sporting activities in physical education lessons – adrenaline activities such as rope games, psychomotor games focusing on the individualisation of the personality, etc. Smaller groups of pupils in the gym are more conducive to this kind of activity, although pupils are often excused from physical education by their parents.

Conclusions

Our research indicates that stress at school is not widespread among pupils. The cause of any stress that does arise is not usually that they are overburdened or that excessive demands are placed on them, but rather other factors such as family problems, the inequality of their social conditions, illness, etc. Girls seem slightly more prone to stress than boys. The level of stress in school can, however, be said to be normal.

Sport and exercise make a significant contribution towards alleviating stress, and can also do so during physical education at school. The individual approach taken by the teacher and his or her enthusiasm during physical education, well thought-out approaches and elements of motivation, greater engagement of pupils and the appeal of individual lessons is, however, extremely important. All these elements taken together contribute to the development of the personality and to health and quality of life.

STRES VE ŠKOLE

Abstrakt: Dnešní životní styl člověka v moderní společnosti představuje řada faktorů, které určují také kvalitu jeho života. Mezi tyto faktory se řadí mimo jiné i časová náročnost zvládnání všech aktuálních denních požadavků, vysoká pracovní náročnost, velké množství volnočasových aktivit i rodinné povinnosti. Člověk se vlivem moderních technologií dostává do kontaktu s mnoha různými tlaky zvenčí a ty způsobují stresové situace a stesy, které mohou negativně ovlivnit i naše zdraví. Tyto faktory působí často již v dětském věku a stres u školních dětí se začíná objevovat v širším měřítku. Pomocí upraveného Testu stresu (Křivohlavý, 2001) jsme zjišťovali aktuální míru stresu u dětí ve škole, odhalovali jsme jejich příčiny a hledali cesty, jak zmírnit příznaky stresu prostřednictvím pohybových aktivit.

Klíčová slova: děti a mládež, stres, zdraví, sportovně pohybové aktivity